

66 B8

LEVEL BOOK.

410.

BRA

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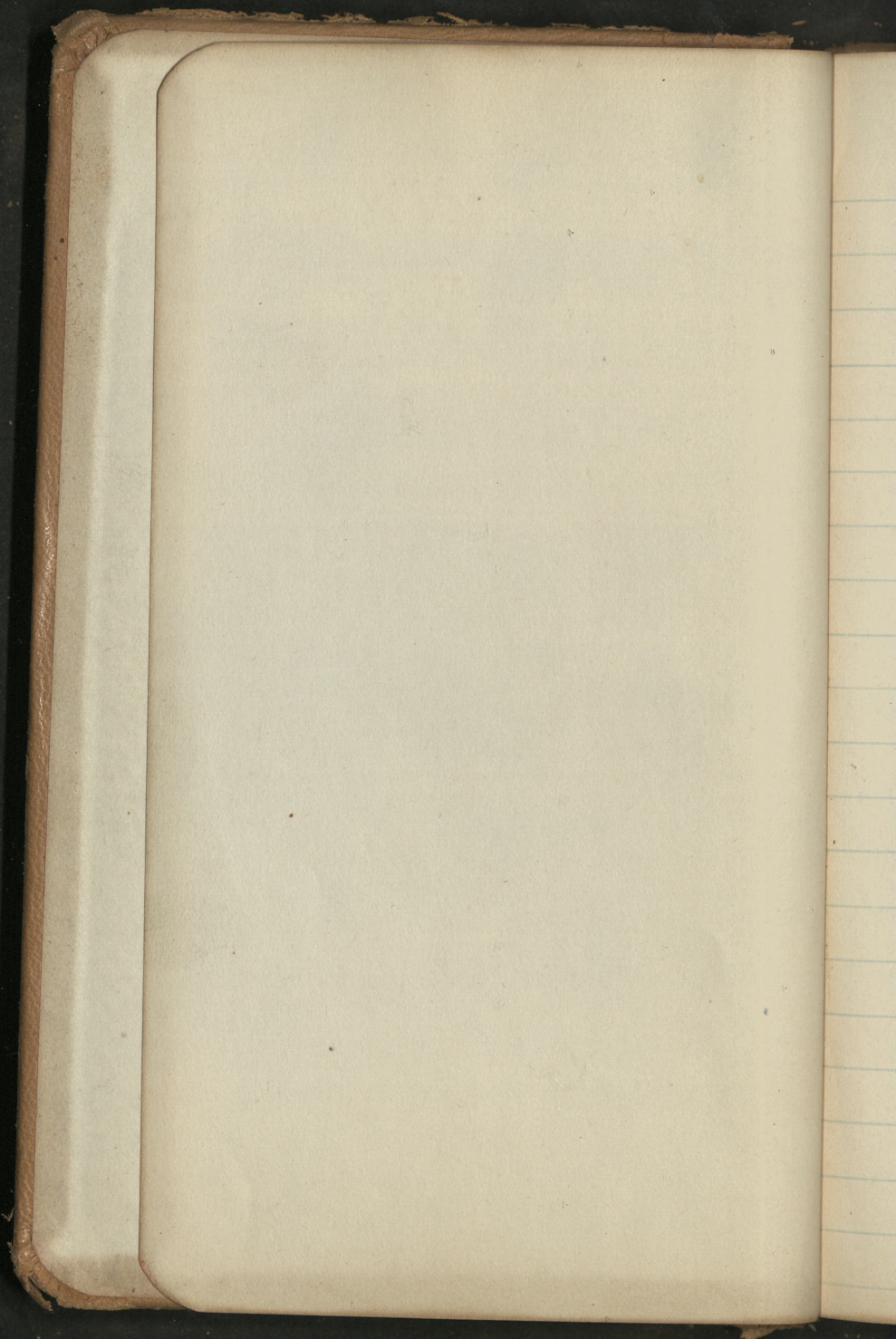
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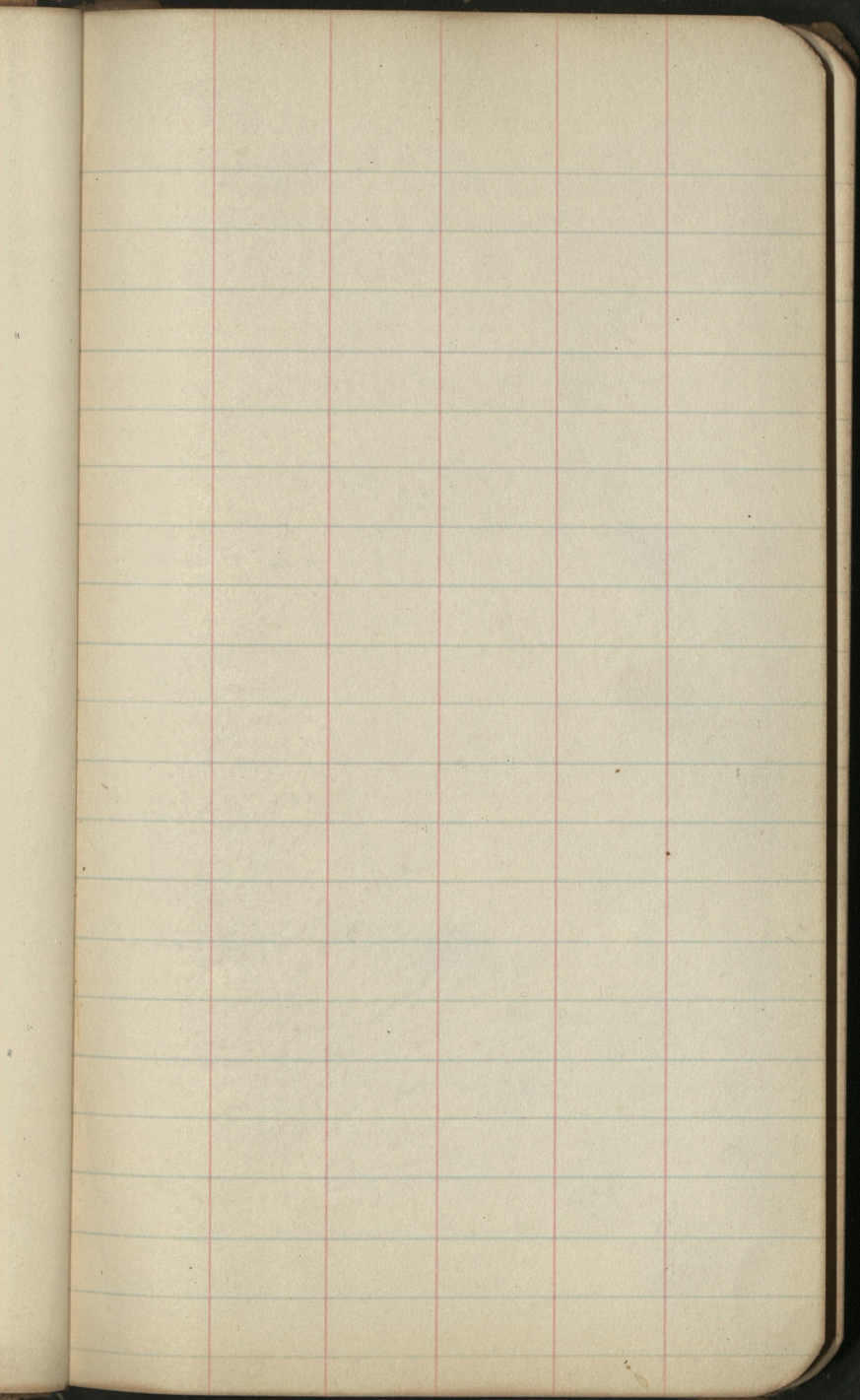
BRADSHAW MOUNTAIN R.R.

——BIG BUG BRANCH——

Construction Notes

BOOK No 2





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Sec. 3

4

3

4

5

Section 3

	L	C	R	
105+85	$\begin{array}{r} +21.5 \\ 13.4 \end{array}$	$\begin{array}{r} +6.0 \\ 13.0 \end{array}$	$\begin{array}{r} 00 \\ 88 \\ 90 \\ 14.0 \end{array}$	
+90	$\begin{array}{r} +21.5 \\ 13.4 \end{array}$	$\begin{array}{r} +15.0 \\ 12.0 \end{array}$	$\begin{array}{r} 00 \\ 80 \\ 15.8 \\ 85 \\ 13.5 \end{array}$	
106+20	$\begin{array}{r} +19.1 \\ 18.0 \end{array}$	$\begin{array}{r} +13.2+8.0 \\ 15.0 \end{array}$	$\begin{array}{r} 00 \\ 10.4 \\ 85 \\ 13.9 \\ 00 \\ 7.4 \\ 7.5 \\ 14.2 \end{array}$	
+40	$\begin{array}{r} +18.2 \\ 19.0 \end{array}$	$\begin{array}{r} +6.0 \\ 14.6 \end{array}$	$\begin{array}{r} +2.5 \\ 8.6 \end{array}$	$\begin{array}{r} 00 \\ 85 \\ 12.6 \\ 00 \\ 3.0 \\ 8.6 \\ 13.4 \end{array}$
+65	$\begin{array}{r} +16.8 \\ 12.0 \end{array}$	$\begin{array}{r} 00 \\ 8.5 \end{array}$	$\begin{array}{r} 13.6 \\ 00 \\ 9.0 \\ 15.0 \end{array}$	
+85	$\begin{array}{r} +16.9 \\ 20.0 \end{array}$	$\begin{array}{r} +10.0+6.5 \\ 17.0 \end{array}$	$\begin{array}{r} 00 \\ 12.0 \\ 8.5 \\ 13.4 \\ 00 \\ 8.0 \\ 11.8 \end{array}$	
107+15	$\begin{array}{r} +13.8 \\ 14.0 \end{array}$	$\begin{array}{r} 00 \\ 8.4 \end{array}$	$\begin{array}{r} 11.1 \\ 00 \\ 8.6 \\ 15.0 \end{array}$	
+40	$\begin{array}{r} +12.9 \\ 16.7 \end{array}$	$\begin{array}{r} +9.8 \\ 14.0 \end{array}$	$\begin{array}{r} 00 \\ 8.0 \end{array}$	$\begin{array}{r} 9.2 \\ 00 \\ 8.6 \\ 15.4 \\ 11.0 \end{array}$
+50				
+75				

108

+30

111+15

+27	$\begin{array}{r} +7.6 \\ 9.9 \end{array}$	$\begin{array}{r} 0.0 \\ 7.5 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} +5.0 \\ 13.0 \end{array}$
+50	$\begin{array}{r} +12.6 \\ 14.0 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} 10.7 \\ 8.0 \end{array}$	$\begin{array}{r} +8.0 \\ 12.0 \end{array}$
+75	$\begin{array}{r} +16.6 \\ 15.0 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} +9.0 \\ 12.6 \end{array}$
+95	$\begin{array}{r} +19.0 \\ 14.0 \end{array}$	$\begin{array}{r} 0.0 \\ 9.6 \end{array}$	$\begin{array}{r} 0.0 \\ 7.8 \end{array}$	$\begin{array}{r} +11.0 \\ 12.0 \end{array}$
112+35	$\begin{array}{r} +19.2+14.0+8.0 \\ 15.0 \end{array}$	$\begin{array}{r} 0.0 \\ 14.0 \end{array}$	$\begin{array}{r} 0.0 \\ 10.0 \end{array}$	$\begin{array}{r} 8.8 \\ 15.6 \\ 8.0 \\ 11.6 \end{array}$
+55	$\begin{array}{r} +19.9 \\ 13.0 \end{array}$	$\begin{array}{r} +11.2+7.4 \\ 11.0 \end{array}$	$\begin{array}{r} 0.0 \\ 10.0 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
+75				

Re Cross Sections

2

Area Cub Yds

388.82

Sta 105+85 to 108+30 Ex 18925

338.41

67.3

In Original Section

1642.6

318.63

365.0

Slips

249.9

321.06

236.9

Haul 122.5 East free

286.50

281.3

" 1740 from 106+60 to 109+10 = 4350

317.08

223.5

246.86

313.3

198.33

206.1

133.40

61.4

68.00

93.2

156.0

38.7

58

0.0

1894.5

0.0

Sta 111+15 to 114+30 Ex

23163.04.

13.80

2.0

In Original Section

2111.7"

175.40

59.3

Slips.

204.6"

221.50

160.6

Haul 1992.11 from

308.60

196.3

" 261.1 E "

319.12

46.35

" 160. from 111+80 to 110+60 = 192.

342.08

244.1

" 1160. " 112+85 1/2 115+05 = 2552.

357.25

259.0

" 469. " 112+15 1/2 120+20 = 3986.

313.0

Total Haul = 6730.

1697.8

Section 3

Sta	L	C	R
113	$\begin{array}{r} +17.0 +10.3 +5.0 \\ \hline 13.5 \quad 1.5 \quad 9.2 \end{array}$	$\begin{array}{r} 0.0 \\ \hline 8.0 \end{array}$	$\begin{array}{r} 0.0 +13.5 \\ \hline 8.0 \quad 14.5 \end{array}$
+35	$\begin{array}{r} +14.4 +8.0 \\ \hline 17.0 \quad 15.6 \end{array}$	$\begin{array}{r} +4.8 \quad 0.0 \\ \hline 9.0 \quad 8.5 \end{array}$	$\begin{array}{r} 0.0 +8.2 \\ \hline 7.8 \quad 10.1 \end{array}$

+55

+95

114+30

115+50

+62	$\begin{array}{r} +5.0 \\ \hline 12.5 \end{array}$	$\begin{array}{r} 0.0 \\ \hline 8.0 \end{array}$	$\begin{array}{r} 0.0 \\ \hline 8.0 \end{array}$
+85	$\begin{array}{r} +14.3 \\ \hline 17.8 \end{array}$	$\begin{array}{r} 0.0 \\ \hline 8.0 \end{array}$	$\begin{array}{r} 0.0 +6.4 \\ \hline 8.6 \quad 13.2 \end{array}$

116+05	$\begin{array}{r} +16.7 +9.0 +4.0 \\ \hline 20.4 \quad 19.0 \quad 10.0 \end{array}$	$\begin{array}{r} 0.0 \\ \hline 9.5 \end{array}$	$\begin{array}{r} 0.0 +9.8 \\ \hline 11.6 \quad 8.0 \quad 13.6 \end{array}$
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+20	$\begin{array}{r} +16.0 +4.0 \\ \hline 19.2 \quad 14.6 \end{array}$	$\begin{array}{r} 0.0 \\ \hline 9.2 \end{array}$	$\begin{array}{r} 0.0 +9.7 \\ \hline 11.9 \quad 9.0 \quad 14.0 \end{array}$
-----	---	--	---

+40	$\begin{array}{r} +14.2 \quad 0.0 \\ \hline 18.2 \quad 12.5 \end{array}$		$\begin{array}{r} 0.0 +2.6 +7.8 \\ \hline 8.3 \quad 15.0 \quad 21.4 \end{array}$
-----	--	--	--

+60	$\begin{array}{r} +9.8 \quad 0.0 \\ \hline 16.0 \quad 13.0 \end{array}$		$\begin{array}{r} 0.0 +1.0 +5.2 \\ \hline 8.0 \quad 21.0 \quad 26.0 \end{array}$
-----	---	--	--

+85

117+95 Exc. for End of Box Culvert

= 0 4.0 6.3

+10 4.0 8.6

+24 4.0 8.6

+36 3.5 4.0

117+45
+50

Re Cross Sections

3

1697.8

318.94

361.7

139.13

141.7

143.51

111.0

6.40

4.1

0.0

2316.3

0.0

4.5

30.61

107.1

220.81

203.7

329.25

185.3

337.99

253.9

352.90

237.1

287.43

103.1

0.0

1126.7

Sta 115+50 to 116+85 Exp 1126.704

In Orig Sec

722.84

Slip on section

403.90

width for Brown

Haul 278.2 East free

" 700. from 116+20 to 117+55 = 945.

" 148.5 " 115+80 to 120+10 = 635.

Total haul 1580.

117+95 Approach to Box Culvert on Left.

Exc 429 Class SR

25.20

132

34.40

15.3

34.40

10.8

14.00

3.6

0.0

42.9

Section 3

S/S	L	C	R
117+95	$\frac{73}{240} + \frac{20}{195} \frac{00}{107.80}$		
118+10	$\frac{+123}{244} + \frac{55}{196.95} \frac{00}{80}$		
+25	$\frac{+164}{280} + \frac{26}{139.80} \frac{00}{21.0}$		
+40	$\frac{+150}{26.0} + \frac{40}{19.0} \frac{00}{100} \frac{00}{15.4}$		
+60	$\frac{+90}{243} + \frac{34}{21.0} \frac{00}{93} \frac{00}{95}$		
+90	$\frac{+140}{30.0} + \frac{22}{23.0} + \frac{10}{104.80} \frac{00}{20.0}$		
119+15	$\frac{+115}{27.6} + \frac{20}{23.0} \frac{00}{96} \frac{00}{11.0}$	$\frac{00}{11.0}$	
+25	$\frac{+135}{26.0} + \frac{30}{23.0} \frac{00}{118} \frac{00}{8.0}$		
+40	$\frac{00}{8.0}$		
120+78			
+80			
121	$\frac{+126}{190} \frac{00}{98} \frac{00}{8.0} + \frac{14}{15.0} + \frac{72}{22.0}$		
+15	$\frac{+196}{21.0} + \frac{166}{20.0} \frac{00}{102} \frac{00}{8.0} \frac{00}{140} + \frac{10}{14.0} + \frac{90}{26.0}$		
+25	$\frac{+210}{240} + \frac{122}{180} + \frac{55}{116.98} \frac{00}{100} \frac{00}{200} \frac{00}{26.0}$		
+45	$\frac{+240}{230} + \frac{118}{180} + \frac{42}{120} \frac{00}{8.7} \frac{00}{100} \frac{00}{25.0}$		
+55	$\frac{+240}{20.0} + \frac{30}{12.9} \frac{00}{86} \frac{00}{4.0} \frac{00}{116} \frac{00}{190}$		
+65	$\frac{+240}{20.0} + \frac{150}{11.0} \frac{00}{8.0} \frac{00}{8.4} \frac{00}{10.5} \frac{00}{15.3} \frac{00}{16.0}$		
+80	$\frac{+230}{202} + \frac{30}{11.2} \frac{00}{7.4} \frac{00}{11.0} \frac{00}{16.8}$		
122	$\frac{+21.6}{13.5} + \frac{103}{13.0} \frac{00}{8.0} \frac{00}{8.7} \frac{00}{14.5}$		
+10	$\frac{+194}{12.2} + \frac{158}{12.0} + \frac{150}{100} \frac{00}{7.0} \frac{00}{8.0} \frac{00}{11.0} \frac{00}{12.8}$		

ReCross Sections

4

Areas Cub Yds.

28.68

Sta 117+95 to 119+40 Exp. 916.0 Cu. Yd.

47.8

143.62

111.4

In Orig. Sections 374.5 "

257.68

131.0

Extra mtd. for borrow 541.5 "

214.00

118.8

Haul 174.5 Cu. Yds. East fork

106.93

213.2

" 200 from 118+35 to 119+70 = 270.

276.85

209.7

" 541 " 116+50 to 120 = 1900.

176.01

53.2

Total Haul 2170.

111.25

30.9

Haul on excess figured from
Cut 116+50 as mtd. was closed
Loose Rock & should have been
borrowed at that point.

0.0

916.0

0.0

0.3

Sta 120+78 to 123+30 Exp. 2609.8 Cu. Yd.

10.90

115.9

In orig. Secs 1961.4 "

302.03

219.8

Slips: 648.4

489.36

201.7

600.03

456.0

Haul 272. Cu. Yds. West fork

631.07

214.2

" 196.9 " " East "

525.74

171.4

" 2140. from 121+65 to 123+85 = 4710.

399.95

245.6

484.35

328.0

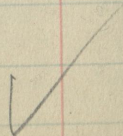
401.24

125.5

276.76

142.9

2221.3



Section 3

Stations	L	C	R
122+25	$\begin{array}{r} +17.0 \\ 11.4 \end{array} \begin{array}{r} +8.0 \\ 9.3 \end{array} \begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} 0.0 \\ 8.5 \end{array} \begin{array}{r} +8.0 \\ 9.6 \end{array} \begin{array}{r} +8.7 \\ 10.2 \end{array}$	
+50	$\begin{array}{r} +12.8 \\ 10.5 \end{array} \begin{array}{r} 0.0 \\ 8.7 \end{array} \begin{array}{r} 0.0 \\ 7.6 \end{array}$	$\begin{array}{r} +8.3 \\ 9.0 \end{array}$	
+80	$\begin{array}{r} +7.2 \\ 9.8 \end{array} \begin{array}{r} 0.0 \\ 8.0 \end{array} \begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} +3.0 \\ 8.8 \end{array}$	

123+05

+08

+30

124+60

0.0

+65 $\begin{array}{r} +5.5 \\ 22.5 \end{array} \begin{array}{r} 0.0 \\ 19.0 \end{array} \begin{array}{r} 0.0 \\ 10.0 \end{array}$

+75 $\begin{array}{r} +9.0 \\ 25.0 \end{array} \begin{array}{r} 0.0 \\ 19.5 \end{array} \begin{array}{r} 0.0 \\ 10.0 \end{array}$

+90 $\begin{array}{r} +5.8 \\ 14.3 \end{array} \begin{array}{r} 0.0 \\ 11.0 \end{array} \begin{array}{r} 0.0 \\ 9.0 \end{array}$

125

$\begin{array}{r} +5.0 \\ 8.9 \end{array} \begin{array}{r} 0.0 \\ 8.0 \end{array}$

+45 $\begin{array}{r} +13.5 \\ 10.0 \end{array} \begin{array}{r} 0.0 \\ 7.2 \end{array} \begin{array}{r} 0.0 \\ 8.4 \end{array} \begin{array}{r} 0.0 \\ 9.0 \end{array} \begin{array}{r} +3.8 \\ 11.5 \end{array}$

+70 $\begin{array}{r} +24.0 \\ 20.2 \end{array} \begin{array}{r} +17.0 \\ 19.0 \end{array} \begin{array}{r} +15.0 \\ 14.0 \end{array} \begin{array}{r} 0.0 \\ 9.0 \end{array} \begin{array}{r} 0.0 \\ 15.0 \end{array} \begin{array}{r} 0.0 \\ 10.0 \end{array} \begin{array}{r} +11.0 \\ 17.0 \end{array}$

+80 $\begin{array}{r} +25.3 \\ 17.8 \end{array} \begin{array}{r} +9.0 \\ 9.0 \end{array} \begin{array}{r} 0.0 \\ 8.8 \end{array} \begin{array}{r} 0.0 \\ 10.4 \end{array} \begin{array}{r} 0.0 \\ 18.0 \end{array}$

126+05

$\begin{array}{r} +25.0 \\ 14.8 \end{array} \begin{array}{r} 0.0 \\ 8.3 \end{array} \begin{array}{r} 0.0 \\ 10.3 \end{array} \begin{array}{r} 0.0 \\ 18.0 \end{array}$

+25 $\begin{array}{r} +25.2 \\ 17.7 \end{array} \begin{array}{r} +14.0 \\ 16.0 \end{array} \begin{array}{r} +12.0 \\ 11.6 \end{array} \begin{array}{r} 0.0 \\ 8.7 \end{array} \begin{array}{r} 0.0 \\ 19.0 \end{array} \begin{array}{r} 0.0 \\ 8.4 \end{array} \begin{array}{r} +13.2 \\ 16.5 \end{array}$

+35 $\begin{array}{r} +25.0 \\ 17.8 \end{array} \begin{array}{r} +16.0 \\ 10.8 \end{array} \begin{array}{r} 0.0 \\ 8.0 \end{array} \begin{array}{r} 0.0 \\ 9.0 \end{array} \begin{array}{r} 0.0 \\ 18.0 \end{array}$

+50 $\begin{array}{r} +22.0 \\ 15.8 \end{array} \begin{array}{r} 0.0 \\ 8.5 \end{array} \begin{array}{r} 0.0 \\ 16.8 \end{array} \begin{array}{r} 0.0 \\ 8.6 \end{array} \begin{array}{r} 0.0 \\ 16.0 \end{array}$

+65 $\begin{array}{r} +21.4 \\ 16.1 \end{array} \begin{array}{r} +14.0 \\ 11.1 \end{array} \begin{array}{r} 0.0 \\ 8.4 \end{array} \begin{array}{r} 0.0 \\ 14.8 \end{array} \begin{array}{r} 0.0 \\ 9.4 \end{array} \begin{array}{r} 0.0 \\ 16.0 \end{array}$

Re Cross Sections

5

Areas Cub Yds.
2221.3

237.57 195.5

184.72 147.5

80.79 43.8

13.80 0.9

300 0.8

0.0 2609.8

0.0 124+60 to 125 E & 20.2 Cus Yds.

24.75 1.5 Solid Rock to finish fill. opposite

24.75 4.1

580 8.5

0.0 1.1

156.00 20.2 Sta 125+03 to 127+55 E & 2669.7 C.Y.

434.30 273.3 In Orig. Sec 2161.70

423.00 158.8 Seips 508.00

481.00 418.5 Haul 245. Cus Yds. West side

495.44 361.6 " 324.7 " East "

438.46 172.9 " 1300 from 126 to 124+30 = 2210.

408.84 235.4 " 800 " 126+65 to 128+35 = 1440

349.41 210.6 Total Haul = 3650

2095.4

Section 3

Stations	L	C	R
126+76	$\begin{array}{r} +200 +9.0 \\ \hline 15.4 \end{array}$ $\begin{array}{r} 00 \\ 10.2 \\ \hline 9.0 \end{array}$	$\begin{array}{r} 00 \\ 9.7 \\ \hline 15.0 \end{array}$	
127+05	$\begin{array}{r} +15.6 \\ \hline 15.4 \end{array}$ $\begin{array}{r} 0.0 \\ 9.6 \\ \hline \end{array}$	$\begin{array}{r} 00 \\ 9.8 \\ \hline 17.0 \end{array}$	$\begin{array}{r} +7.0 \\ \hline 15.0 \end{array}$
127+36	$\begin{array}{r} +10.8 \\ \hline 14.3 \end{array}$ $\begin{array}{r} 0.0 \\ 9.8 \\ \hline \end{array}$	$\begin{array}{r} 00 \\ 8.5 \\ \hline 11.0 \end{array}$	$\begin{array}{r} +4.0 \\ \hline 17.0 \end{array}$
=127+24			

+45

+55

129

+25	$\begin{array}{r} 7.0 \\ \hline 22.0 \end{array}$ $\begin{array}{r} +10.7 \\ \hline 12.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$	(0.0)	
+50	$\begin{array}{r} +15.0 \\ \hline 27.0 \end{array}$ $\begin{array}{r} +4.0 \\ \hline 16.0 \end{array}$ $\begin{array}{r} 0.0 \\ 10.0 \\ \hline \end{array}$		$\begin{array}{r} 0.0 \\ 7.0 \\ \hline \end{array}$
+65	$\begin{array}{r} +19.0 +11.0 +6.0 +1.0 \\ \hline 28.0 25.0 22.0 18.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$	(+5.4)	$\begin{array}{r} 0.0 \\ 10.0 \\ \hline \end{array}$
+90	$\begin{array}{r} +20.4 +6.4 \\ \hline 22.0 19.0 \end{array}$ $\begin{array}{r} 0.0 \\ 7.0 \\ \hline \end{array}$	(6.8)	$\begin{array}{r} 0.0 \\ 14.0 \\ \hline \end{array}$

130

	$\begin{array}{r} +18.0 \\ \hline 15.0 \end{array}$ $\begin{array}{r} +8.0 \\ \hline 9.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$		$\begin{array}{r} 0.0 \\ 17.0 \\ \hline \end{array}$
+15	$\begin{array}{r} +18.0 \\ \hline 13.0 \end{array}$ $\begin{array}{r} 0.0 \\ 7.0 \\ \hline \end{array}$	(811.2)	$\begin{array}{r} 0.0 +2.0 \\ 14.0 16.0 \\ \hline \end{array}$
+25	$\begin{array}{r} +21.6 \\ \hline 13.4 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$		$\begin{array}{r} 0.0 +2.0 \\ 15.0 16.0 \\ \hline \end{array}$
+40	$\begin{array}{r} +34.0 \\ \hline 20.5 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$		$\begin{array}{r} 0.0 +4.0 \\ 11.0 12.0 \\ \hline \end{array}$
+50	$\begin{array}{r} +36.0 +10.0 \\ \hline 19.6 12.0 \end{array}$ $\begin{array}{r} 0.0 \\ 9.0 \\ \hline \end{array}$		$\begin{array}{r} 0.0 +5.0 \\ 9.0 13.9 \\ \hline \end{array}$
+75	$\begin{array}{r} +30.0 +6.0 \\ \hline 21.0 9.5 \end{array}$ $\begin{array}{r} 0.0 \\ 8.4 \\ \hline \end{array}$		$\begin{array}{r} 0.0 +7.0 \\ 10.0 13.0 \\ \hline \end{array}$
+95	$\begin{array}{r} +27.4 \\ \hline 18.0 \end{array}$ $\begin{array}{r} 0.0 \\ 9.0 \\ \hline \end{array}$		$\begin{array}{r} 0.0 +14.3 \\ 9.5 11.6 \\ \hline \end{array}$
131+15	$\begin{array}{r} +27.8 \\ \hline 19.5 \end{array}$ $\begin{array}{r} 0.0 \\ 10.5 \\ \hline \end{array}$		$\begin{array}{r} 0.0 +9.6 \\ 8.0 10.4 \\ \hline \end{array}$
+40	$\begin{array}{r} +26.0 \\ \hline 18.4 \end{array}$ $\begin{array}{r} 0.0 \\ 11.0 \\ \hline \end{array}$		$\begin{array}{r} 0.0 +12.0 \\ 8.0 11.0 \\ \hline \end{array}$

Re Cross Sections

6

Areas Cub Yds
2098.4

309.69

292.8

235.47

215.4

132.63

62.6

28.30

35

0.0

2669.7

0.0

11.5

Sta 129 to 133 + 47 Ede. 4233.709

37.10

In Orig. Sections 3244.4

96.4

171.05

Slips 989.31

125.1

279.10

256.3

274.60

Haul 45.0 West from

82.3

" 208.7 East "

170.01

" 398.0 from 131 to 135 + 0.5 = 1472.5

113.7

239.40

102.2

312.48

196.1

393.37

20.0 Bldrs.

149.8

415.61

383.0

412.20

12.8 Bldrs.

342.3

511.89

343.0

414.24

40.48

460.02

11.9 Bldrs.

11.42

2768.4

Section 3

Stations	L	C	R
131+47	$\begin{array}{r} +27.0 \\ 19.6 \end{array}$	$\begin{array}{r} 0.0 \\ 11.0 \end{array}$	$\begin{array}{r} 0.0 +6.0 \\ 8.0 12.0 \end{array}$
+50	$\begin{array}{r} +29.6 \\ 19.0 \end{array}$	$\begin{array}{r} 0.0 \\ 10.0 \end{array}$	$\begin{array}{r} 0.0 +6.0 \\ 8.0 12.0 \end{array}$
+70	$\begin{array}{r} +27.0 \\ 20.0 \end{array}$	$\begin{array}{r} +6.6 \\ 12.0 \end{array}$	$\begin{array}{r} 0.0 +8.2 \\ 10.1 10.1 \end{array}$
+75	$\begin{array}{r} +27.0 \\ 21.0 \end{array}$	$\begin{array}{r} +8.0 \\ 12.0 \end{array}$	$\begin{array}{r} 0.0 +8.0 \\ 9.0 12.0 \end{array}$
+95	$\begin{array}{r} +23.6 \\ 22.0 \end{array}$	$\begin{array}{r} 0.0 \\ 11.0 \end{array}$	$\begin{array}{r} 0.0 +2.0 \\ 9.0 10.0 \end{array}$
132+15	$\begin{array}{r} +21.0 \\ 21.0 \end{array}$	$\begin{array}{r} 0.0 \\ 9.0 \end{array}$	$\begin{array}{r} +8.0 \\ 10.0 \end{array}$

+55

+85

133+20

+37

+47

Borrow Pit at Sta 136+40 on L

0	0.0	$\begin{array}{r} +5.6 \\ 2.0 \end{array}$
+20	0.0	$\begin{array}{r} 0.0 +11.3 \\ 17.0 26.0 \end{array}$
+28	0.0	$\begin{array}{r} 0.0 +7.3 +12.7 \\ 17.0 31.0 34.0 \end{array}$
+36	0.0	$\begin{array}{r} 0.0 +8.0 +13.6 \\ 21.0 33.0 36.0 \end{array}$
+42	0.0	$\begin{array}{r} 0.0 +7.2 \\ 15.0 20.0 \end{array}$
+54	0.0	$\begin{array}{r} 0.0 +6.0 \\ 13.0 16.0 \end{array}$
+60	0.0	$\begin{array}{r} 0.0 \\ 12.0 \end{array}$

Re Cross Sections.

7

27684
 420.70 46.4
 414.22 15 Bldr
 294.1
 379.76 79.0
 472.95 326.7
 409.10 8.0 Bldr.
 232.4
 218.50 236.1
 120.25 3.3 Bldr
 85.7
 54.05 95.9
 93.94 5.9 Bldr
 44.5
 47.34 5.8
 0.0 4733.7

0.0 35.6
 96.05 136440 Brown Bit Etc. 163.4 Culls
 134.80 34.2
 164.40 44.3
 54.00 24.3
 39.00 20.7
 4.3
 0.0 163.4

Class Solid Rock 163.4 " "
 Haul into file 135450

Section 3

Stations

L

C

R

136+42

+60

+75

+85

137

+25

Slip $2.3 \times 14 \times 15.0$

+65

+93

Slip $3 \times 8 \times 25$

1

138+33

+70

$\begin{array}{r} +18.0 \\ 19.0 \end{array}$

$\begin{array}{r} +6.0 \\ 12.0 \end{array}$

$\begin{array}{r} 0.0 \\ 9.0 \end{array}$

$3.5 \times 9 \times 20$

$\begin{array}{r} 0.0 \\ 8.0 \end{array}$

$\begin{array}{r} +7.8 \\ 10.0 \end{array}$

139

+20

$\begin{array}{r} +15.2 \\ 14.2 \end{array}$

$\begin{array}{r} 0.0 \\ 8.0 \end{array}$

$\begin{array}{r} 0.0 \\ 8.0 \end{array}$

$\begin{array}{r} +6.3 \\ 9.0 \end{array}$

$\begin{array}{r} +14.2 \\ 16.2 \end{array}$

$\begin{array}{r} +6.0 \\ 10.0 \end{array}$

$\begin{array}{r} 0.0 \\ 8.0 \end{array}$

$\begin{array}{r} 0.0 \\ 8.0 \end{array}$

$\begin{array}{r} +4.9 \\ 9.2 \end{array}$

+35

+55

140.

+50

141+0.9

+15

+50

+65

Re Cross Sections

8

Areas Cub.Yds.

0.0		Sta 136+42 to 140+50	Exp 2w2g
78.38	17.4		
	5.0	Ledge	In Orig Sec.
	71.8		Slips
180.29			2088.0
	62.6		164.9
157.70		Haul 3053 mst free	
	96.0		
187.76		" 67.6 East "	
	183.6	" 1880.0 pm / 38 + 30% / 35 + 70 = 4885.	
208.80	17.9		
	291.1		
184.20			
	193.2		
188.40	22.2		
	289.6		
202.60	23.3		
	340.0		
293.63			
	275.1		
201.48			
	142.1		
182.17			
	79.7		
104.88	10.5	Bldrs.	
	64.2		
68.47			
	63.1		
7.25			
	45		
0.0	2752.9		
0.0			
	0.4		
56.0			
	22.2		
28.65			
	26.1		
65.30			
	23.08		
	279.5		

Section 3

Stations	L	C	R
142	+20.0 20.2	0.0 8.0	0.0 8.0
+30	+20.2 15.0	0.0 8.0	0.0 8.0
+55	+19.8 16.8	+5.0 0.0 10.0 8.0	0.0 8.0
+80	+16.6 14.0	0.0 8.0	0.0 8.0
143	+20.0 20.0	+7.0 0.0 10.8 8.0	0.0 8.0
+20	+14.5 13.0	+7.0 0.0 9.0 7.6	0.0 8.0
+50	+15.3 16.6	0.0 8.0	0.0 8.0
144	+16.2 19.2	0.0 7.6	0.0 8.9
+40	+14.2 20.0	+6.0 0.0 9.0 8.0	0.0 8.0
+70	+10.8 16.0	0.0 8.0	0.0 8.0
145	+6.8 12.8	0.0 8.0	
+28	0.0		
145+45			
+72			
+80	+12.0 15.0	0.0 8.0	0.0 8.0
146+05	+11.4 15.0	0.0 8.0	0.0 8.0
+25			
+40			
+65	+13.6 15.0	0.0 8.0	0.0 9.0
+95	+14.6 18.0	0.0 8.0	0.0 8.0
147+23			
+20			

Re Cross Sections

9

Areas	Cu Yds.		
290.88	279.5	Sta 141+09 to 145+28 E.C.	2547.46
358.15	360.6	In Orig Sec	2314.1
354.68	330.0	Scips	233.3
316.25	310.6		
260.70	213.7	Haul 250.8 East free	
171.50	160.0	" 970. from 142+60 to 140+80 =	1745.
197.75	205.7	" 2138 East free	
186.13	355.4	" 180 from 144+35 to 145+45 =	200.
175.87	268.1	" 471.7 " 143+90 to 149+15 =	2475.
119.38	87.3	" 461.1 wasted into Road for Bucks	
37.70	13.1	Total Haul	4420.
0.0	2547.4		

0.0	21.1	Sta 145+45 to 147+25 E.C.	665.20
63.47	26.1	In Orig Sec	566.3
112.50	91.1	Scips	98.9
84.26	32.8	Haul 34.8 opposite into fill free	
4.25	15.2	" 169.4 East free	
50.65	115.0	" 461. from 146+55 to 149 =	1130
197.68	238.8		
232.11	123.7		
6.40	1.4		
0.0	665.2		

Section 3

Stations	L	C	R
151+35			
+45			
+60	$\begin{array}{r} 13.2 \\ 8.8 \\ \hline \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$	
+85	$\begin{array}{r} +10.5 \\ 13.7 \\ \hline \end{array}$	$\begin{array}{r} 0.0 \\ 7.6 \\ \hline \end{array}$	$\begin{array}{r} 0.0 \\ 7.0 \\ \hline \end{array}$
152+10	$\begin{array}{r} +17.4 \\ 17.3 \\ \hline \end{array}$	$\begin{array}{r} 0.0 \\ 9.0 \\ \hline \end{array}$	$\begin{array}{r} 0.0 \\ 7.6 \\ \hline \end{array}$
+35	$\begin{array}{r} +18.4 \\ 12.6 \\ \hline \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$
+60	$\begin{array}{r} +20.1 \\ 13.0 \\ \hline \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$
153			
+20			
+70	$\begin{array}{r} +15.0 \\ 16.7 \\ \hline \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$
154	$\begin{array}{r} +11.2 \\ 14.0 \\ \hline \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$
+30			
+35			
+55			
+65			
+78			

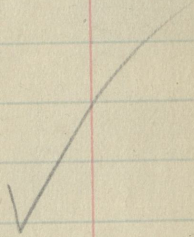
Re Cross Sections

10

Areas Cub Yds

0.0		Sta 151+35 to 154+78 Etc	2150.2 @ 4
0.56	0.1	In original Sections	
	3.2	Slips	1989.5"
11.20			160.7"
	87.8	Haul 250.5 Cy. west of	
178.81	237.1	" 139.8 East	
333.34		" 860. from 152+40 to 154+70 =	1185
	302.1	" 900 " 153+35 to 155+20 =	1165
319.20		Total haul	2350.
	320.2		
372.42			
	403.0		
171.68			
	84.7		
56.88			
	325.6		
294.81			
	257.2		
168.21			
	99.5		
109.2			
	1.4		
4.00			
	6.7		
14.18			
	8.3		
30.90	5.9	Bldr.	
	4.4		
0.0			

2150.2



Section 3

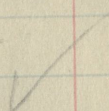
Stations	L	C	R
155+84			
156+15			
+50	$\frac{+20.8}{19.0}$	$\frac{+12.0}{15.0}$	$\frac{+8.6}{12.0}$
	0.0	8.0	0.0
157	$\frac{+31.5}{22.4}$	$\frac{+4.0}{10.0}$	$\frac{0.0}{7.5}$
	0.0	7.5	0.0
+25	$\frac{+33.8}{19.2}$	$\frac{+9.0}{10.0}$	$\frac{0.0}{7.5}$
	0.0	8.0	0.0
+50	$\frac{+29.0}{18.0}$	$\frac{0.0}{10.0}$	$\frac{0.0}{8.0}$
	0.0	2.5	0.0
+70	$\frac{+25.0}{18.0}$	$\frac{0.0}{8.7}$	$\frac{0.0}{8.0}$
	0.0	8.7	0.0
158+00	$\frac{+19.2}{18.6}$	$\frac{0.0}{8.0}$	$\frac{0.0}{9.0}$
	0.0	8.0	0.0

Re Cross Sections

11

Areas Cub Yds.

00		Sta 155.84 to 158 Ede	3959.7 Cy.
	115.7		
201.56		In orig Sections	3314.7 "
	418.0	Slip	645.0 "
443.31			
	1047.0		
687.46		Haul 526.9 rest free	
	647.1	" 2990. from 157+10 to 166+90 = 28700.	
710.17		Made 504.7	
	650.9		
695.70			
	482.6		
607.40			
	598.4		
469.72			
	<u>3959.7</u>		



Section A

S Sta L C R

158

+35

+88

+93

160+30 B. Pit on Left for backfilling

0 $\frac{+30}{75}$ $\frac{0.0}{5.3}$ 0.0

+10 $\frac{+64}{140}$ $\frac{0.0}{8.6}$ 0.0

+18 $\frac{+52}{160}$ $\frac{0.0}{9.0}$ 0.0

+38 0.0

161+35 Borrow Pit for backfilling 3x5x12

162+75 Slip $\frac{1}{2}(8 \times 8 \times 22)$

168+90

+98

169+25 $\frac{+96}{140}$ $\frac{+40}{9.0}$ $\frac{0.0}{8.0}$ 0.0 +35 $\frac{0.0}{8.0}$ $\frac{8.9}{8.9}$

+50 $\frac{+117}{140}$ $\frac{+60}{9.0}$ $\frac{0.0}{8.0}$ 0.0 +59 $\frac{0.0}{8.0}$ $\frac{9.5}{9.5}$

170 $\frac{+132}{140}$ $\frac{+60}{9.5}$ $\frac{0.0}{8.0}$ 0.0 +69 $\frac{0.0}{8.0}$ $\frac{9.7}{9.7}$

+40 $\frac{+145}{170}$ $\frac{+58}{8.4}$ $\frac{0.0}{8.0}$ (2100) 0.0 +70 $\frac{0.0}{8.0}$ $\frac{9.8}{9.8}$

ReCross Sections

12

Areas Cu. Yds.

46972

4354

20196

2057

764

0.0

641.6

Sta 158 to 158+93.6 641.6 Cu. Y.

In Orig. Sec. 556.0 " "

Slips 85.6 " "

Haul 1361 East from

" 300 from 158+156 to 159+90 = 495.

" 205.5 " 158+05.7 to 166+60 = 1755

Total haul 2250.

7.95

6.6

2752

7.5

23.46

00

8.7

6.7

295

32.0

Sta 160+30 to 161+35

Borrow for backfilling 29.5 Cu. Yds. to Rock

00

32

33.05

74.7

11640

1289

16210

3283

19248

288.4

19680

745

898.0

Section 4

Sta	L	C	R
170+50	$\frac{+15.0}{19.0}$	$\frac{+7.0}{8.6}$	$\frac{0.0}{8.0}$
+60	$\frac{+14.8}{17.5}$	$\frac{+7.3}{8.6}$	$\frac{0.0}{8.0}$
+75	$\frac{+15.0}{22.0}$	$\frac{0.0}{8.0}$	$\frac{0.0}{8.0}$
+80	$\frac{+9.5}{14.6}$	$\frac{+5.0}{10.0}$	$\frac{0.0}{8.5}$
171+10			$\frac{+5.6}{14.5}$
+50			
+75			
+98			

176+90

Slip 3x6x30.

184+20

Slip 2x8x10.

185

" 4x16x20.

185+40

" 4x4x25

185+75

" 2.5x4x30

186+75

" 6.0x12x25

Re Cross Sections

13

Areas Cub. Yds.

205.56	4.0 298.0 71.9	Sta 168+90 to 171+98 Exp. 1580.7 Cull.
182.54	107.5	In original sections 1503.6 " "
204.55	34.0	Slip 77.1 " "
162.32	121.4	Have 192.7 Mat free
56.29	166.8	" 144.4 East "
168.90	139.5	" 600. from 170+85 to 174+05 = 1920
132.49	37.6	" 350 " 167+75 to 167+95 = 630
0.0	1580.7	Make 293.6 Total have 2550.

200

59

47.4

14.8

11.1

66.6

145.8

Section 4

Stations

L

C

R

192+60

193

$\frac{+9.2}{14.0} \frac{0.0}{8.0}$

$\frac{0.0}{8.0}$

+20

$\frac{+16.2}{15.0} \frac{0.0}{8.0}$

$\frac{0.0}{8.0} \frac{+2.5}{8.9}$

+50

$\frac{+17.6}{18.9} \frac{0.0}{8.0}$

$\frac{0.0}{8.0} \frac{+6.4}{12.2}$

194

$\frac{+19.8}{20.3} \frac{0.0}{8.0}$

$\frac{0.0}{8.0} \frac{+8.2}{12.8}$

+35

$\frac{+22.0}{28.5} \frac{0.0}{8.0}$

$\frac{0.0}{8.0} \frac{+9.6}{14.4}$

+65

$\frac{+19.6}{21.3} \frac{0.0}{8.0}$

$\frac{0.0}{8.0} \frac{+7.1}{13.0}$

195

$\frac{+17.0}{15.8} \frac{0.0}{8.0}$

$\frac{0.0}{8.0} \frac{+6.5}{9.6}$

+35

+85

197+80

198+23

$\frac{+6.9}{13.1} \frac{0.0}{8.0}$

$\frac{0.0}{8.0}$

+50

$\frac{+10.0}{17.6} \frac{0.0}{8.0}$

$\frac{0.0}{8.0} \frac{+1.2}{10.0}$

199

$\frac{+10.6}{15.0} \frac{0.0}{8.0}$

$\frac{0.0}{8.0} \frac{+2.5}{10.3}$

+50

+85

Re Cross Sections

14

Areas Cu. Yds.

0.0		Sta 192+60 to 195+85 Epc	2329.5 Cy.
82.30	40.6	In orig. Sections	1824.3 "
155.45	88.1	Slips	505.2 "
274.08	238.6	Haul 120.4 west free	
		" 252.4 East "	
328.36	557.8	" 160 from 193+30 to 192+25 =	170.
		" 883.2 " 193+80 " 189+80 =	5300.
424.89	488.2	" 840. " 194+55 " 196+25 =	1430
		" 73.5 " 194+20 " 197+60 =	250
311.08	408.9	Total Haul	7150.
204.38	286.4		
69.90	177.8		
	431		
0.0	2329.5		

		Sta 197+80 to 199+85 Euc	538.2 C.Y.
0.0		In orig. Sec.	440.1 "
61.64	32.7	Slips	98.1 "
114.29	87.9	Haul 62.0 west free	
121.78	218.6	" 196.2 East "	
63.50	171.6	" 280. from 198+70 to 200+25 =	430
	27.4		
0.0	538.2		

Section 4

Stations

L

C

R

200+35

+50

+75

201+15

+35

+50

+80

+95

202+07

+20

+40

+50

+75

203

+20

+42

+65

204+05

+33

+60

$$\begin{array}{r} +75 \\ 17.0 \end{array} \quad \begin{array}{r} +40 \\ 8.0 \end{array} \quad \begin{array}{r} 0.0 \\ 7.5 \end{array}$$

$$\begin{array}{r} 0.0 \\ 9.2 \end{array} \quad \begin{array}{r} +60 \\ 18.0 \end{array}$$

$$\begin{array}{r} +24.9 \\ 23.5 \end{array} \quad \begin{array}{r} +18.0 \\ 11.5 \end{array} \quad \begin{array}{r} 0.0 \\ 8.8 \end{array} \quad (+19.0)$$

$$\begin{array}{r} 0.0 \\ 9.0 \end{array} \quad \begin{array}{r} +9.4 \\ 11.8 \end{array} \quad \begin{array}{r} +18.6 \\ 20.2 \end{array}$$

$$\begin{array}{r} +30.7 \\ 20.3 \end{array} \quad \begin{array}{r} +22.0 \\ 17.5 \end{array} \quad \begin{array}{r} +18.0 \\ 11.0 \end{array} \quad \begin{array}{r} 0.0 \\ 8.5 \end{array} \quad (+24.2)$$

$$\begin{array}{r} 0.0 \\ 8.0 \end{array} \quad \begin{array}{r} +17.0 \\ 14.0 \end{array} \quad \begin{array}{r} +23.0 \\ 18.0 \end{array}$$

$$\begin{array}{r} +33.0 \\ 22.0 \end{array} \quad \begin{array}{r} +26.0 \\ 17.0 \end{array} \quad \begin{array}{r} +18.4 \\ 12.4 \end{array} \quad \begin{array}{r} 0.0 \\ 8.5 \end{array} \quad (27.4)$$

$$\begin{array}{r} 0.0 \\ 8.0 \end{array} \quad \begin{array}{r} +8.5 \\ 10.0 \end{array} \quad \begin{array}{r} +25.0 \\ 20.5 \end{array} \quad \text{add } 2.5 \text{ to } 8.0$$

$$\begin{array}{r} +34.7 \\ 20.8 \end{array} \quad \begin{array}{r} +20.0 \\ 15.6 \end{array} \quad \begin{array}{r} 0.0 \\ 9.0 \end{array} \quad (+30.0)$$

$$\begin{array}{r} 0.0 \\ 8.5 \end{array} \quad \begin{array}{r} +10.8 \\ 17.6 \end{array} \quad \begin{array}{r} +25.5 \\ 22.0 \end{array}$$

$$\begin{array}{r} +36.0 \\ 20.5 \end{array} \quad \begin{array}{r} +19.6 \\ 14.3 \end{array} \quad \begin{array}{r} +11.0 \\ 14.0 \end{array} \quad \begin{array}{r} +7.0 \\ 11.6 \end{array} \quad \begin{array}{r} 0.0 \\ 10.0 \end{array}$$

$$\begin{array}{r} 0.0 \\ 9.0 \end{array} \quad \begin{array}{r} +4.0 \\ 12.0 \end{array} \quad \begin{array}{r} +23.0 \\ 18.5 \end{array}$$

$$\begin{array}{r} +35.7 \\ 21.0 \end{array} \quad \begin{array}{r} +20.6 \\ 15.0 \end{array} \quad \begin{array}{r} +10.5 \\ 15.0 \end{array} \quad \begin{array}{r} +6.5 \\ 11.2 \end{array} \quad \begin{array}{r} 0.0 \\ 10.0 \end{array} \quad (+31.2)$$

$$\begin{array}{r} 0.0 \\ 8.0 \end{array} \quad \begin{array}{r} +10.0 \\ 10.6 \end{array} \quad \begin{array}{r} +22.7 \\ 18.0 \end{array}$$

$$\begin{array}{r} +32.6 \\ 19.0 \end{array} \quad \begin{array}{r} +20.2 \\ 15.0 \end{array} \quad \begin{array}{r} +12.8 \\ 15.0 \end{array} \quad \begin{array}{r} +7.0 \\ 9.6 \end{array} \quad \begin{array}{r} 0.0 \\ 8.0 \end{array} \quad (+28.4)$$

$$\begin{array}{r} 0.0 \\ 8.5 \end{array} \quad \begin{array}{r} +15.3 \\ 15.0 \end{array} \quad \begin{array}{r} +18.2 \\ 18.0 \end{array}$$

$$\begin{array}{r} +31.2 \\ 21.5 \end{array} \quad \begin{array}{r} +13.0 \\ 10.5 \end{array} \quad \begin{array}{r} 0.0 \\ 8.0 \end{array}$$

$$\begin{array}{r} 0.0 \\ 8.0 \end{array} \quad \begin{array}{r} +11.0 \\ 12.0 \end{array} \quad \begin{array}{r} +18.0 \\ 18.0 \end{array}$$

$$\begin{array}{r} +28.0 \\ 24.0 \end{array} \quad \begin{array}{r} +17.7 \\ 20.5 \end{array} \quad \begin{array}{r} +11.0 \\ 11.0 \end{array} \quad \begin{array}{r} 0.0 \\ 9.0 \end{array} \quad (+21.2)$$

$$\begin{array}{r} 0.0 \\ 7.5 \end{array} \quad \begin{array}{r} +7.8 \\ 11.0 \end{array} \quad \begin{array}{r} +12.0 \\ 18.0 \end{array}$$

$$\begin{array}{r} +23.5 \\ 16.8 \end{array} \quad \begin{array}{r} +14.0 \\ 11.0 \end{array} \quad \begin{array}{r} 0.0 \\ 8.0 \end{array} \quad (+18.2)$$

$$\begin{array}{r} 0.0 \\ 8.0 \end{array} \quad \begin{array}{r} +7.5 \\ 10.0 \end{array} \quad \begin{array}{r} +9.8 \\ 14.0 \end{array}$$

$$\begin{array}{r} +24.8 \\ 17.6 \end{array} \quad \begin{array}{r} +11.0 \\ 10.0 \end{array} \quad \begin{array}{r} 0.0 \\ 8.0 \end{array} \quad (+15.4)$$

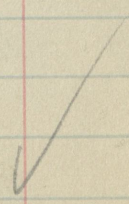
$$\begin{array}{r} 0.0 \\ 8.0 \end{array} \quad \begin{array}{r} +7.0 \\ 10.0 \end{array}$$

Re Cross Sections

15

Areas Cub. Yds.

0.0		Sta 200+35 to 204+60 Exp. 5560.6 Cy.
107.2	2.0	In original Sections 4797.9 "
33.20	20.3	Seeps 762.7 "
136.0	34.7	
64.00	28.7	Have 46.0 rest for
153.04	60.3	" 164.6 East "
		" 5350. from 202+55 to 206+85 = 23000.
483.12	353.4	
624.75	307.7	
728.68	104	
946.16	300.8	
941.16	403.2	
848.46	699.0	
733.00	331.4	
656.44	732.2	
578.95	643.3	
374.43	416.5 → 41. Yds deducted	
350.22	388.4	
182.25	308.6	
36.00	394.5	
0.0	113.2	
	12.0	
	5560.6	



Section A

Stations

L

C

R

H

204+85

+90

$$\begin{array}{r} +7.0 \\ 22.4 \end{array} \quad \begin{array}{r} 0.0 \\ 11.0 \end{array} \quad \begin{array}{r} (0.0) \\ 5.0 \end{array}$$

205+05

$$\begin{array}{r} +17.8 \\ 42.0 \end{array} \quad \begin{array}{r} +7.6 \\ 30.0 \end{array} \quad \begin{array}{r} 0.0 \\ 20.0 \end{array} \quad \begin{array}{r} (0.0) \\ 10.0 \end{array}$$

+20

$$\begin{array}{r} +16.5 \\ 35.6 \end{array} \quad \begin{array}{r} 0.0 \\ 20.4 \end{array} \quad \begin{array}{r} (0.0) \\ 4.0 \end{array}$$

+42

$$\begin{array}{r} +11.0 \\ 25.0 \end{array} \quad \begin{array}{r} 0.0 \\ 20.5 \end{array} \quad \begin{array}{r} 0.0 \\ 12.0 \end{array}$$

+60

$$\begin{array}{r} +7.0 \\ 21.0 \end{array} \quad \begin{array}{r} 0.0 \\ 17.0 \end{array} \quad \begin{array}{r} 0.0 \\ 10.0 \end{array}$$

+65

+75

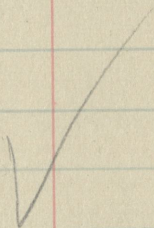
+80

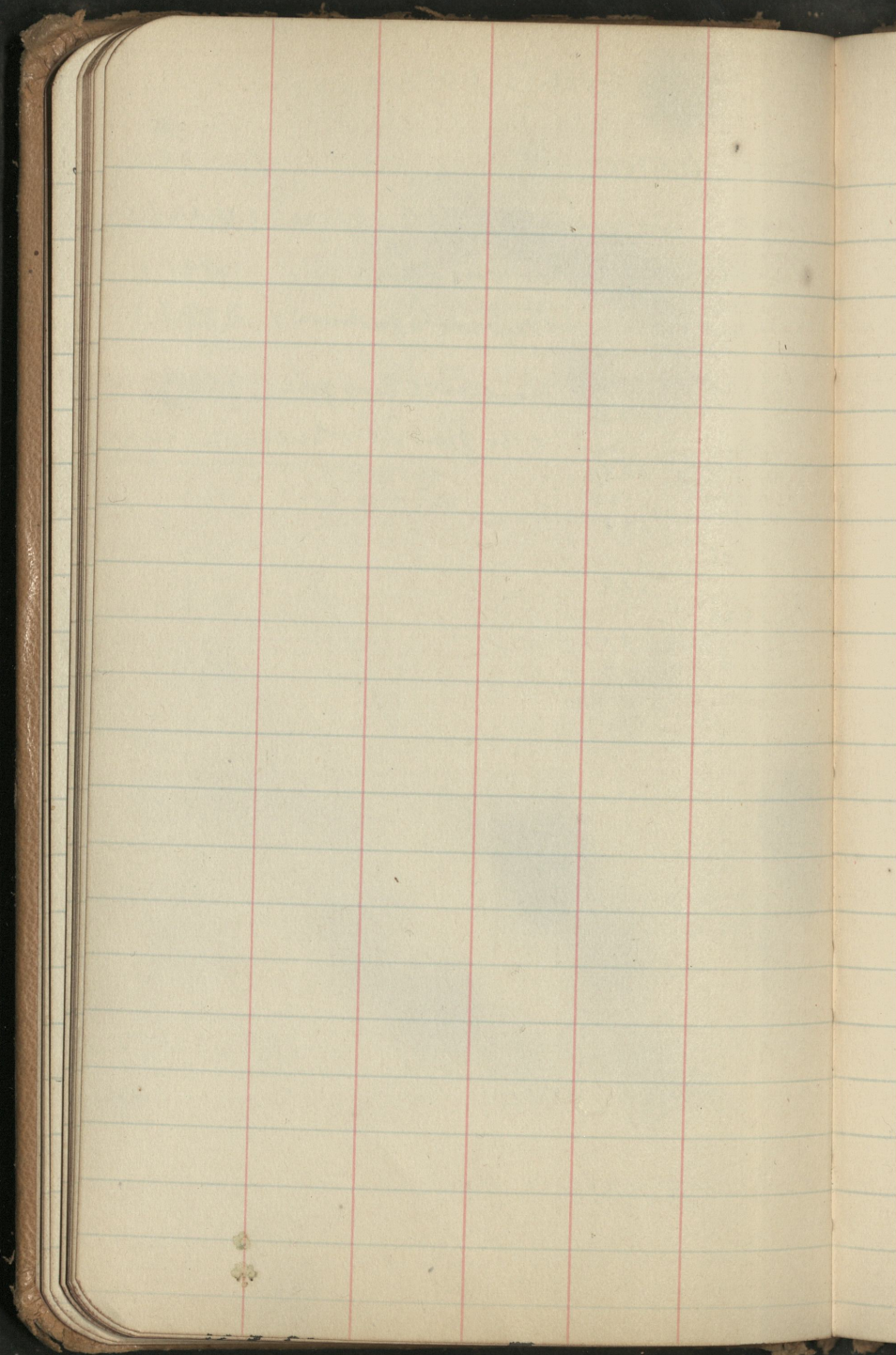
Re Cross Sections

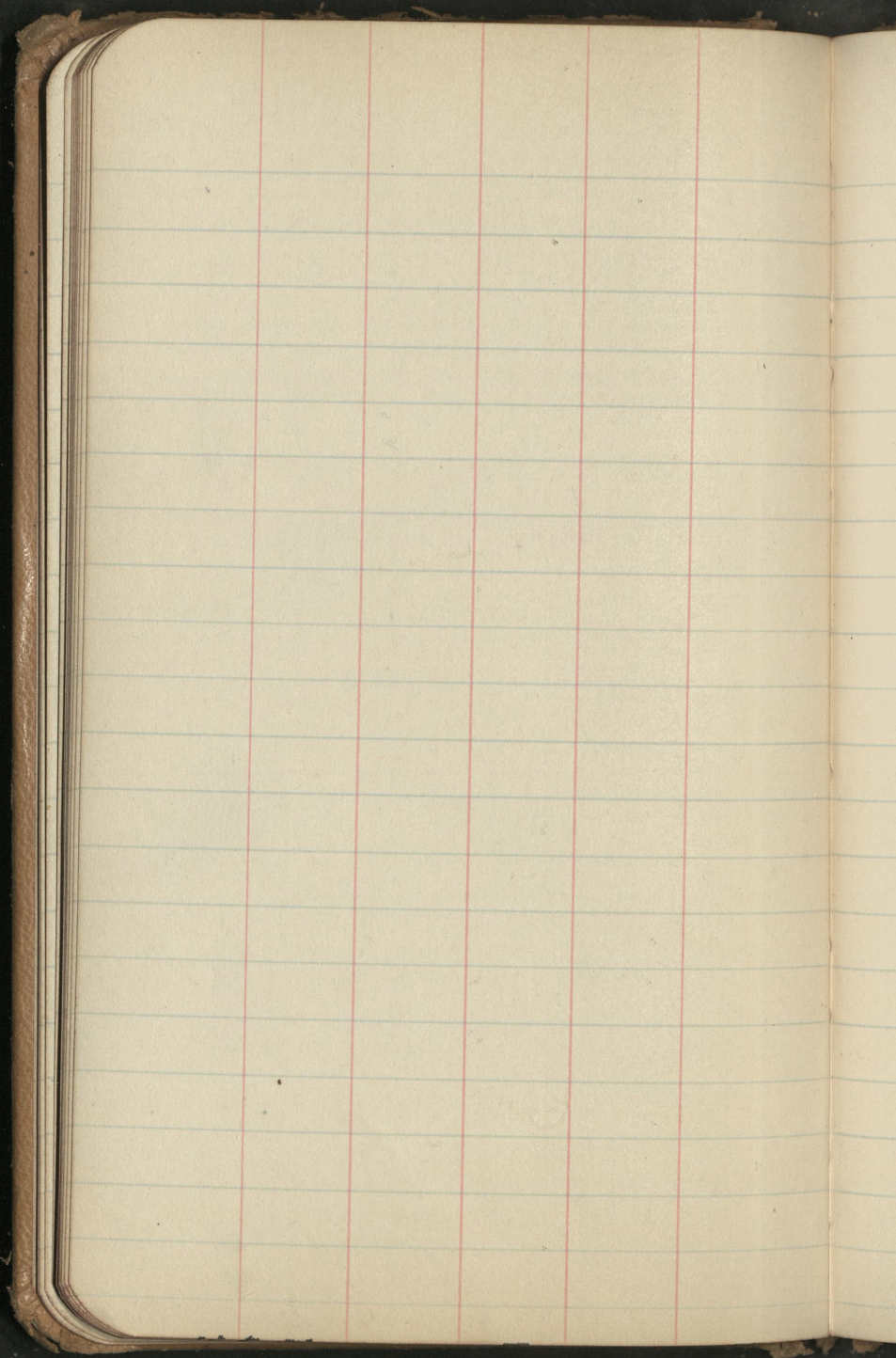
16

Areas Cub.Yds.

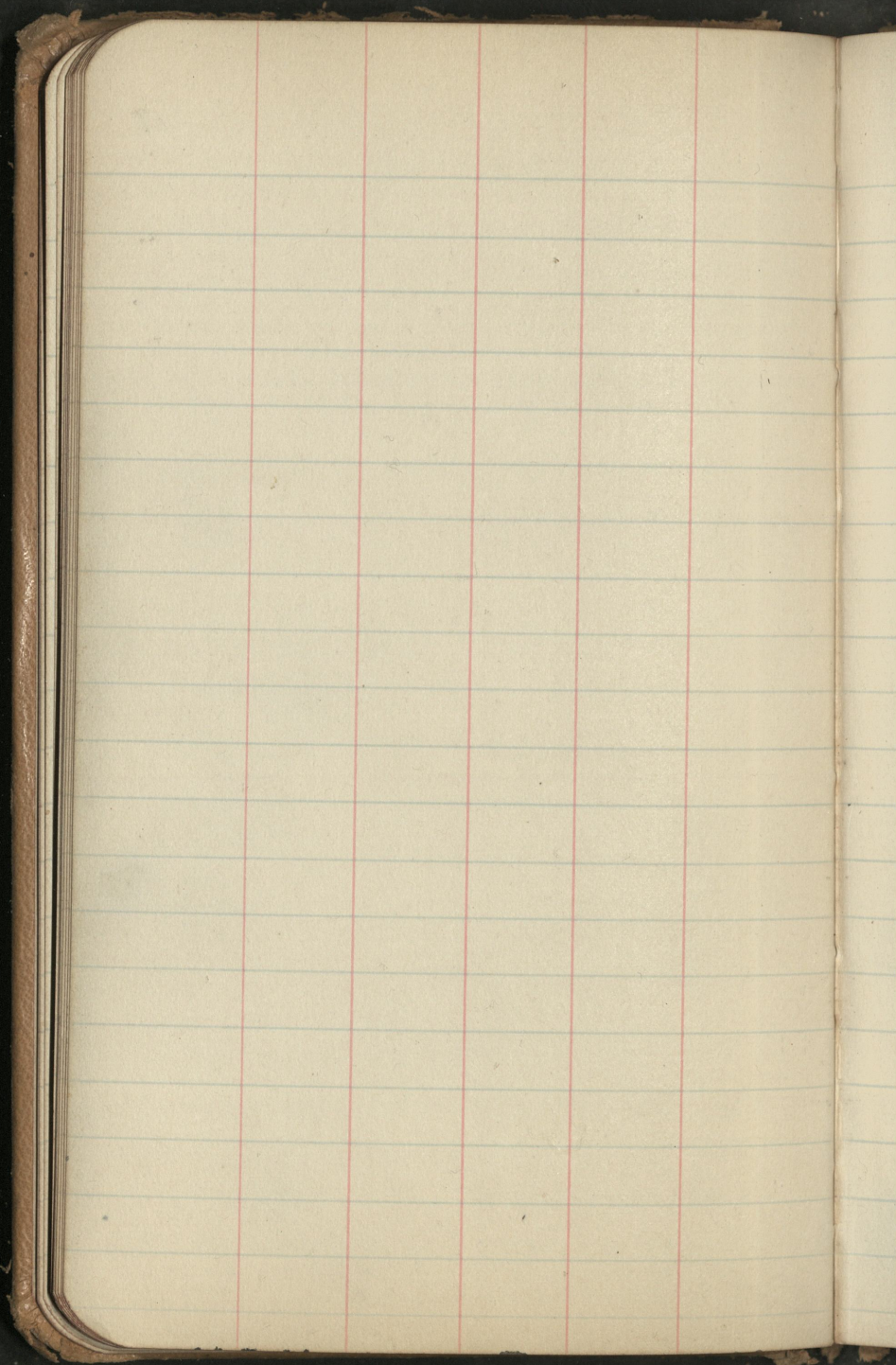
0.0		Sta 204+85 to 205+80 Exp 419.9 cu.
24.41	1.5	In Orig. Sec's. <u>99.1 "</u>
174.50	55.3	Extra mtdth for Borrow = 320.8 "
201.30	104.4	
162.50	148.2	Haul 259.9 East from
94.50	85.7	" 160 from 205+10 to 206+30 = 200.
43.36	12.8	
16.25	11.0	
0.0	1.0	
	<u>419.9</u>	







18



19

Section 3

Station Grade

L C. R

105 + 85 5784.5

$\frac{+21.5}{13.4}$ +16.1 $\frac{+11.2}{10.8}$

106 + 48 5781.84

$\frac{+17.6}{12.4}$ +12.1 $\frac{+8.0}{10.0}$

+ 75

$\frac{+19.3}{12.9}$ +14.5 $\frac{+10.0}{5.0}$ $\frac{+7.8}{10.0}$

107

$\frac{+15.5}{11.9}$ +11.1 $\frac{+7.7}{9.9}$

+ 30

$\frac{+15.9}{12.0}$ +11.2 $\frac{+8.0}{10.0}$

+ 50

$\frac{+11.8}{11.0}$ +7.1 $\frac{+3.8}{9.0}$

+ 75

$\frac{+8.0}{10.0}$ +4.0 $\frac{0.0}{8.0}$

108

$\frac{+3.9}{9.0}$ 0.0 $\frac{-6.4}{15.0}$

+ 30

$\frac{0.0}{8.0}$ -3.8 $\frac{-14.4}{25.0}$

+ 50 5774.66

$\frac{-2.2}{9.8}$ -6.6 $\frac{-9.7}{5.0}$ $\frac{-20.7}{32.9}$

Areas

Cub. yds.

20

Exc. Emb

Exc. Emb

325.61

Sta 105 to 108 + 306 x 20 x 07

657.5 Slips 2499 See P. 2 Class

237.92

 $\frac{1}{2}$ Lo. Rock = 125.0 C.Y.

253.3 Balance of Exp.

Solid Rock = 1895.7 C.Y.

268.67

223.4 Haul, See P. 2 4350.

213.79

240.3

218.80

130.4

133.40

932

68.00

0.0

38.7

6.9

15.60

22.40

5.8

75.3

113.10

1642.6

128.2 SS.

249.9

Slips See P. 2

4020.7

129.6

236.80

7965

10083

Section 3

Station Grade

L C R

109 5772.98

$\frac{-7.4}{16.3}$ -14.7 $\frac{-33.6}{49.0}$

+30

$\frac{-8.4}{17.5}$ -15.6 $\frac{-35.0}{50.8}$

+50

$\frac{-7.9}{16.9}$ -14.6 $\frac{-32.4}{47.5}$

110

$\frac{-7.4}{16.3}$ -13.9 $\frac{-2.88}{43.0}$

+50

-33.6

$\frac{-5.2}{13.5}$ -10.2 $\frac{-2.02}{32.3}$

111

$\frac{-1.4}{8.8}$ -4.5 $\frac{-9.5}{18.9}$

16' R.B. 1/4:1 slope

+15

$\frac{0.0}{8.0}$ -1.5 $\frac{-3.3}{11.1}$

+27

$\frac{+1.8}{8.5}$ +0.8 $\frac{0.0}{8.0}$

+50

$\frac{+7.6}{9.9}$ +6.7 $\frac{+5.5}{9.4}$

+945 5763.08

+95

-36.7

$\frac{+16.6}{12.2}$ +14.0 $\frac{+11.2}{10.8}$

Areas Cub. yds.

21

Exc. Emb Exc. Emb.

10083

62345

Sta 107+75 to 111+27

726.9 emb. 4507.9 made
from cuts at ends

68464

479.9

611.17

1064.8

53884

799.5

32248

391.6

100.48

35.1

00

25.88

3.8

13.80

00

2.0

4507.9

51.5

107.05

316.0

27220

412.7

782.2

Section 3

Station Grade

L

C

R

112 + 35 5761.60

+18.6
12.7

+14.1

+11.2
10.8

+75

-3.67

+19.9
13.0

+17.1

+15.7
11.9

+84.5 5759.78

113

+16.7
12.2

+14.1

+13.6
11.4

+35

+14.0
11.5

+10.2

+8.3
10.1

+55

+7.9
10.0

+8.6

+6.8
9.7

+95

-4.00

0.0
8.0

+0.8

0.0
8.0

114 + 30

-6.2
14.8

-10.4

-13.5
23.9

+45

-5.2
13.5

-8.1

-19.0
30.8

+70

-3.5
11.4

-4.0

-8.2
17.3

+82 5751.88

115 + 10

-3.64

-15.0
25.8

-18.2

-21.1
32.4

Areas

Cub. yds.

22

Exc. Emb

Exc. Emb

782.2

284.88

474.2 Sta 111+15 to 114+30 ^{cut} 2478.7

355.29

Slips 204.6, See Page 2, Class

297.6 Loose Rock = 204.6 Cut.

287.58

Balance of Cut

Solid Rock = 2274.1 " "

315.6

199.36

Haul, See P. 2, = 6730.

127.0

14351

111.0

6.40

0.0

4.1 175.1

0.0

270.19

2111.7

162.4 S.G.

204.6 Slips See P. 2.

2478.7

148.4

264.12

Sta 13+95 to 115+62

167.8 Emb 1705.4 Cut.

9835

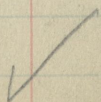
made from
cut mat.

5655

66507

1295

1186.3



Section 3

Station Grade

L C. R

115 + 15 5750.69

$\frac{-13.0}{233}$ -19.9 $\frac{-24.2}{373}$

16' R.B. $\frac{1}{4}$:1 slope.

+50

$\frac{0.0}{8.0}$ -2.2 $\frac{-7.9}{16.9}$

+62

$\frac{+3.5}{8.9}$ +1.3 $\frac{0.0}{8.0}$

+85

$\frac{+10.9}{10.7}$ +9.7 $\frac{+7.2}{9.8}$

116 + 10

-3.64

$\frac{+14.1}{11.6}$ +12.1 $\frac{+10.0}{10.5}$

+40

$\frac{+13.1}{11.3}$ +11.4 $\frac{+9.4}{10.4}$

+60

$\frac{+8.7}{10.2}$ +8.1 $\frac{+7.9}{10.0}$

+85

$\frac{0.0}{8.0}$ 0.0 $\frac{0.0}{8.0}$

117 + 10

$\frac{-11.0}{20.8}$ -9.0 $\frac{-6.8}{15.5}$

+30 5742.89

$\frac{-11.8}{21.8}$ -15.4 $\frac{-13.3}{23.6}$

Areas Cub. yds.
Exc. Emb. Exc. Emb.

1186.3

733.17

510.9

0.0

55.04

3.7

8.2

24.99

0.0

1705.4

838 Sta 115+50 to 116+85

171.83

Exc. 1165.1 Cut yds.

186.1 115+50 to 116+10 Class S.R. = 2895 Cu.
 Class balance of cut including
 excess Loose Rock = 8758

230.11

2466 Haul Sec P.3 = 1580.

213.69

134.0

148.21

68.6

0.0

0.0

722.8
3844.56

4039 Ex Fa width Sec P.3

1165.1

104.5

225.65

245.6

437.43

505.9

856.0

Section 3

Station Grade

117+60 5741.77

L C. R
 $\begin{array}{r} -5.9 \\ 144 \\ \hline \end{array}$ -11.2 $\begin{array}{r} 12.3 \\ 5.0 \\ \hline \end{array}$ $\begin{array}{r} 16.4 \\ 10.0 \\ \hline \end{array}$ $\begin{array}{r} 30.4 \\ 45.0 \\ \hline \end{array}$
 +60 B.C. 1×2
 16 R.B. $\frac{1}{4}$:1 slope.

+95

$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$ -2.3 $\begin{array}{r} 11.7 \\ 21.6 \\ \hline \end{array}$

118+10

$\begin{array}{r} +7.2 \\ 9.8 \\ \hline \end{array}$ +4.1 $\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$

+25

$\begin{array}{r} +10.5 \\ 10.6 \\ \hline \end{array}$ +6.9 $\begin{array}{r} +4.0 \\ 9.0 \\ \hline \end{array}$

+60

$\begin{array}{r} +4.4 \\ 9.1 \\ \hline \end{array}$ +2.5 $\begin{array}{r} +0.8 \\ 8.2 \\ \hline \end{array}$

+90

$\begin{array}{r} +8.8 \\ 10.2 \\ \hline \end{array}$ +5.3 $\begin{array}{r} +3.2 \\ 8.8 \\ \hline \end{array}$

119+25

$\begin{array}{r} +4.8 \\ 9.2 \\ \hline \end{array}$ +2.3 $\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$

+40

$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$ -2.3 $\begin{array}{r} -4.5 \\ 12.6 \\ \hline \end{array}$

+60

$\begin{array}{r} -4.0 \\ 12.0 \\ \hline \end{array}$ -8.4 $\begin{array}{r} -13.6 \\ 24.0 \\ \hline \end{array}$

120

5733.06

$\begin{array}{r} -9.4 \\ 18.8 \\ \hline \end{array}$ -15.6 $\begin{array}{r} -29.4 \\ 43.8 \\ \hline \end{array}$

Areas

Cub. yds.

24

Exc.

Emb.

Exc.

Emb.

0.4
450

473.19

856.0

Sta 116+85 to 117+95

Emb 1225.3 Cub yds

355.3 Part made from

00

74.99

Cut South, balance

made from Exc for

12.1

14.0

Box on left 117+95

65.29

0.0

1225.3

53.1

Sta 117+95 Exc. for Box on

see P. 3 Solid Rock 42.9 Cy.

125.62

122.9 Sta 117+95 to 119+40 Exc 956.5 Cub.

64.05

Class Excess, See P 4, 541.5 Cub.

Loose Rock, balance of

90.2

Cut Solid Rock = 415.0 Cy.

98.35

89.0

Haul, See P 4, = 2170.

38.98

0.0

7.2

0.0

39.44

374.5

40.5

541.5

956.5

7.3

93.4

212.80

619.9

624.08

789.4

1510.0

station Grade		Section 3		
		C.	R.	
120+30	5731.97 287+95	$\frac{-15.8}{26.8}$	$\frac{-23.8}{36.8}$	-20.7
+50		$\frac{-12.5}{22.6}$	$\frac{-14.3}{24.9}$	-13.1
+78		$\frac{0.0}{8.0}$	$\frac{-0.7}{7.9}$	0.0
+80		$\frac{+1.3}{8.3}$	$\frac{0.0}{8.0}$	+0.7
121	-364	$\frac{+11.1}{10.8}$	$\frac{+8.6}{10.2}$	+9.6
+25		$\frac{+19.7}{12.9}$	$\frac{+14.4}{11.6}$	+16.9
+50		$\frac{+21.4}{13.4}$	$\frac{+15.5}{11.9}$	+18.2
+75		$\frac{+20.4}{13.4}$	$\frac{+13.5}{11.4}$	+16.9
122		$\frac{+20.3}{13.1}$	$\frac{+14.0}{11.5}$	+15.8
+25	5724.84	$\frac{+17.4}{12.4}$	$\frac{+8.7}{10.2}$	+12.7

Areas. Cub. yds.
Exc. Emb. Exc. Emb.

2.5

796.86

1570.0

Sta 119+25 to 120+80

445.1 Emb 2166.4 Cut 46

326.4 made from cut last

404.92

449.4 " " " West

649.7 " " " 116+50

211.2 178.2 " " " 115+80

562.7 " " " 112+N

0.0

2.45

0.3

0.1



10.90

0.0

2166.4

70.6

179.60

Sta 120+78 to 123+30 Exc. 2745.6 Cut.

242.1 Class Superficial, 648.4 cu.
Loose Rock

343.42

Class Balance of cut

Solid Rock = 2097.2 cu.

333.9

377.83

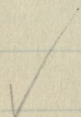
Haul, see Page 4 = 4710.

334.7

345.16

313.3

331.54



268.3

247.91

2025

1765.7

Section 3

Station Grade

122+50 5723.93

+12.8
11.2

C. +10.0

R. +8.1
10.0

+80

+7.2
9.8

+4.3

+3.0
8.8

123+05

+1.4
8.4

+1.0

0.0
8.0

+08

0.0
8.0

+0.5

0.0 -0.5
4.0 7.6

+30

-4.7
12.9

-3.4

-3.5
11.4

+50

-3.52

-17.6
29.0

-16.2

-14.9
25.6

+75

-24.3
37.4

-24.8

-32.7
47.9

124

-18.6
30.3

-30.1

-46.0
64.5

+50

-6.0
14.5

-8.4

-24.0
37.0

+70 5716.19

-2.0
9.5

-5.2

-21.2
33.5

Areas. Cub. yds.
Exc. Emb. Exc. Emb.

26

18960 1765.7

150.2

8079

43.8

1380 0.0

0.9 0.1

300 .75

0.8 28.8

0.0

7001

1961.4

135.8 SG.

648.4 slips Sect. 4.

231.9

55601

2745.6

Sta 123+05 to 125+30

8395 Embk't 4682.7 Cuft

1257.22

Made from Cuts at

Ends. and Borrow

1347.2 Pit on L 124+60

See P 5

1652.84

1827.9 Class Borrow
Solid Rock 20.2 Cuft

321.30

190.5

193.00

181.9

4647.8

Station	Grade	Section		
		L	C	R
125 + 03	5715.03	$\frac{0.0}{8.0}$	-36	$\frac{-13.5}{23.9}$

+ 30	-3.52	$\frac{+9.2}{10.3}$	+3.7	$\frac{0.0}{8.0}$
------	-------	---------------------	------	-------------------

+ 60	-3.52	$\frac{+17.5}{12.4}$	+13.1	$\frac{+9.1}{10.3}$
------	-------	----------------------	-------	---------------------

+ 80	-3.52	$\frac{+22.1}{13.5}$	+17.0	$\frac{+13.1}{11.3}$
------	-------	----------------------	-------	----------------------

126 + 05	-3.75	$\frac{+24.1}{14.0}$	+19.6	$\frac{+14.5}{11.6}$
----------	-------	----------------------	-------	----------------------

+ 35	-3.75	$\frac{+23.0}{13.8}$	+18.8	$\frac{+14.2}{11.6}$
------	-------	----------------------	-------	----------------------

+ 76	-3.75	$\frac{+18.5}{12.6}$	+13.6	$\frac{+8.9}{10.2}$
------	-------	----------------------	-------	---------------------

127 + 05	-4.00	$\frac{+13.6}{11.4}$	+9.0	$\frac{+5.9}{9.5}$
----------	-------	----------------------	------	--------------------

127 + 36.6 Back =
 127 + 24.7 Forward = 5706.26

	-4.00	$\frac{+9.6}{10.4}$	+5.5	$\frac{+2.7}{8.7}$
--	-------	---------------------	------	--------------------

+ 45	-3.67	$\frac{+2.9}{8.7}$	+2.0	$\frac{0.0}{8.0}$
------	-------	--------------------	------	-------------------

Areas Cub. yds.
Exc. Emb. Exc. Emb.

27

0.0 104.67

4647.8

235 34.9

7066 0.0

4682.7

181.0

255.08

Sta 125+03 to 127+55 Exc. 2808.1 Cy.

224.4 Class Slips, Sec P. 5

350.80

Loose Rock 508.0 Cy.

Balance of Cut

350.0 Class Solid Rock 2300.1 "

405.28

440.5 Haul Sec P. 5 - 3650.

387.56

495.2

264.64

234.5

172.05

160.2

101.73

48.9

2830

3.5

2161.7

1384.56

508.0

2808.1

3.0



Station Grade

Section 3
L C R

127+55 570515

$\frac{00}{8.0}$ -1.7 $\frac{-38}{11.8}$

+95

-3.67

$\frac{-7.3}{16.1}$ -13.1 $\frac{-237}{36.6}$

128+147 570296

+47

$\frac{-2.5}{11.4}$ -7.2 $\frac{-15.1}{25.9}$

16' R.B. 1/4:1 slope.

129

$\frac{00}{8.0}$ -4.9 $\frac{-15.5}{26.4}$

+50

$\frac{+9.5}{10.4}$ +4.0 $\frac{00}{7.0}$ $\frac{-0.5}{7.6}$

+52

-3.36

$\frac{+9.4}{10.4}$ +4.5 $\frac{0.0}{8.0}$

130

$\frac{+16.0}{12.0}$ +7.4 $\frac{+3.3}{8.8}$

+25

$\frac{+21.6}{13.4}$ +13.7 $\frac{+10.4}{7.0}$ $\frac{+6.8}{9.7}$

+40

$\frac{+23.3}{13.8}$ $\frac{+23.0}{9.0}$ +17.0 $\frac{+6.4}{9.6}$

add for Boulder

$\left. \begin{array}{l} 6 \times 6 \times 12 \\ 4 \times 4 \times 4 \\ 5 \times 5 \times 5 \end{array} \right\}$

+50 569507

$\frac{+30.5}{13.6}$ +16.3 $\frac{+8.0}{5.5}$ $\frac{+6.8}{9.7}$

Areas. Cub yds.
Exc. Emb. Exc. Emb.

28

0.0 24.19

3.0

354.0 Sta 127 + 45 1/2 129 + 52

453.69

Emblt 1403.1 Cy.

628.9 Made from Cuts

199.38

at ends

331.7

0.0 138.53

45.0 85.5

72.80

1403.1

5.6

79.00

0.0

207.2

154.16

201.0

279.98

169.6

330.75

23.0

124.4

341.27

312.5

1088.3

27
44
5

Section 3

Station Grade

130 + 75 5694.22

$\begin{array}{r} +266 \\ 14.7 \end{array}$ +15.3 $\begin{array}{r} +9.0 \\ 10.3 \end{array}$

add for Boulders
 $\begin{array}{l} \{5 \times 5 \times 10\} \\ \{4 \times 4 \times 6\} \end{array}$

+ 95

$\begin{array}{r} +258 \\ 14.5 \end{array}$ +22.0 $\begin{array}{r} +14.3 \\ 11.6 \end{array}$

131 + 15

$\begin{array}{r} +24.9 \\ 14.2 \end{array}$ +15.0 $\begin{array}{r} +9.6 \\ 10.4 \end{array}$

+ 40

$\begin{array}{r} +24.6 \\ 14.2 \end{array}$ +17.0 $\begin{array}{r} +16.2 \\ 7.0 \end{array}$ $\begin{array}{r} +12.0 \\ 11.0 \end{array}$

add for Boulders
 $4 \times 8 \times 9$

+ 47

$\begin{array}{r} +24.5 \\ 14.1 \end{array}$ $\begin{array}{r} +20.2 \\ 5.0 \end{array}$ $\begin{array}{r} +15.4 \\ 3.0 \end{array}$ +14.2 $\begin{array}{r} +7.8 \\ 10.0 \end{array}$

+ 50

$\begin{array}{r} +27.7 \\ 14.9 \end{array}$ $\begin{array}{r} +24.0 \\ 6.0 \end{array}$ $\begin{array}{r} +14.1 \\ 3.0 \end{array}$ +13.0 $\begin{array}{r} +7.3 \\ 9.8 \end{array}$

add for Boulder: $2 \times 4 \times 5$

+ 70

$\begin{array}{r} +24.9 \\ 14.2 \end{array}$ $\begin{array}{r} +17.4 \\ 7.0 \end{array}$ +14.3 $\begin{array}{r} +8.2 \\ 10.1 \end{array}$

+ 75

$\begin{array}{r} +23.5 \\ 13.9 \end{array}$ +18.3 $\begin{array}{r} +13.8 \\ 11.5 \end{array}$

+ 95

$\begin{array}{r} +21.3 \\ 13.3 \end{array}$ +19.1 $\begin{array}{r} +8.6 \\ 2.0 \end{array}$ $\begin{array}{r} +4.2 \\ 9.1 \end{array}$

131 + 98 5690.10

$\begin{array}{r} +16.4 \\ 12.1 \end{array}$ +9.1 $\begin{array}{r} +4.0 \\ 9.0 \end{array}$

add for Boulders
 $\begin{array}{l} 4 \times 6 \times 7 \\ 3 \times 4 \times 4 \end{array}$

Areas. Cub yds.

29

Exc. Emb. Exc. Emb.

1088.3

333.65

12.8

289.3

5x10
1x6

447.50

285.2 Sta 129 to 133 + 47 E.C.P.

322.50

4469.0 Cub Yds.

322.3 Class Sippo 1/2 Lo Rock = 4946.0
Balance of Cut Solids = 3974.4

373.70

11.9

88.9

x9

310.86

Haul, See Page 6, 14725.

353

325.20

1.5

228.2

4x5

291.06

62.3

381.61

246.2

283.05

25.6

177.61

8.0

187.2

2893.0

6x7
4x4

Section 3

Station Grade

L. C. R

132 + 30 5689.03

+14.3
11.6 +7.1 +2.3
8.6

+55

-3.30

+12.0
11.0 +5.5 0.0
8.0

+69.3 5687.69

add for boulder
2 x 5 x 9 = 33

+85

+8.4
10.1 +2.9 0.0 -6.0
14.5

+

133 + 20 5685.00

+11.8 +7.8 0.0 -4.0
11.0 1.5 +5.9 2.8 12.0
Ledge 4 x 5 x 8 = 89

+37

-3.67

+6.2
9.6 +2.3 +2.3 0.0 -3.8 -6.0
4.0 6.0 8.0 14.5

+47

0.0
8.0 -4.4 -31.5
46.4

133 + 59.3 Back.

133 + 97.4 Ford.
5684.39

-3.4
11.3 -9.2 -32.4
47.5

134 + 30

-4.0
12.0 -10.1 -29.4
43.8

+65

-4.00

-7.5
16.4 -15.1 -42.5
60.1

135 + 0.5

-15.5
26.4 -27.6 -58.0
79.5

135 + 08.3 5679.96

Areas. Cub. yds.

Exc. Emb. Exc. Emb.

30

138.11

2893.0

110.3

100.25

0.6

3.3

9 = 3.3

85.7

3.3

54.05

9.00

Sta 132455 1/2 136+60

95.9

11.3

Emb. 9818.2 Cu. Y.

93.94

8.40

5.9

9573.0 made from

44.5

6.8

Cut at ends balance

47.34

13.15

25.8

45.0

from Borrow Pit on
left Sta 136+40

00

229.93

3244.4

2353.56

See P. 7.

Class Borrow

Solid Rock 163.4 Cu. Y.

Slips acc. to

989.3

142.5

395.78

4469.0

479.6

398.69

746.2

752.58

1830.6

1718.67

1484.8

4750.1

Section 3

Station Grade

L C R

135+25 567934

$\frac{-19.4}{31.3}$ -32.1 $\frac{-68.2}{92.3}$

+50

$\frac{-23.0}{35.8}$ -34.1 $\frac{-56.8}{78.0}$

136

$\frac{-9.7}{19.1}$ -14.3 $\frac{-23.0}{35.8}$

+42

-3.68

$\frac{0.0}{8.0}$ -2.2 $\frac{-9.2}{18.5}$

+60

$\frac{+9.3}{10.3}$ +4.5 $\frac{0.0}{8.0}$
ledge 3x3 x 15 = 5.0

+75

$\frac{+14.2}{11.6}$ +9.5 $\frac{+7.8}{6.0}$ $\frac{+4.4}{9.1}$

+83.2 5673.52

+85

$\frac{+14.0}{11.5}$ +8.4 $\frac{+3.9}{9.0}$

137

$\frac{+14.1}{11.5}$ +10.1 $\frac{+6.2}{9.6}$

+25

-4.00

$\frac{+15.2}{11.8}$ +11.2 $\frac{+6.9}{9.7}$

+65 567025

$\frac{+14.4}{11.6}$ +10.0 $\frac{+5.4}{9.4}$

Areas. Cub. yds.

Exc. Emb. Exc. Emb.

31

4750.1

2290.38

2087.9

2219.59

2524.6

506.99

442.0

0.0

61.35

17.4

13.6

78.38

0.0

5.0

9818.2

71.8

18029

62.6

157.70

96.0

18776

183.6

20880

291.1

18420

193.2

920.7



Section 3

Station Grade

L C R

137 + 93.5669.13

$\frac{+14.6}{11.7}$ +10.0 $\frac{+6.0}{9.5}$

138 + 33

$\frac{+15.8}{12.0}$ +10.5 $\frac{+6.5}{9.6}$

+ 70

$\frac{+16.6}{12.2}$ +12.3 $\frac{+7.8}{10.0}$

+ 83.566583

139

$\frac{+14.2}{11.6}$ +9.7 $\frac{+6.3}{9.6}$

+ 20

$\frac{12.7}{11.2}$ +9.1 $\frac{+4.9}{9.2}$

+ 35

$\frac{+12.6}{11.7}$ +4.5 $\frac{+2.2}{8.6}$
add for boulders $\left. \begin{array}{l} 2 \times 4 \times 8 \\ 4 \times 6 \times 8 \\ 3 \times 3 \times 3 \end{array} \right\} 10.5$

+ 55

$\frac{+8.7}{10.2}$ +3.7 $\frac{0.0}{8.0}$

140

$\frac{+2.9}{8.7}$ $\frac{0.0}{3.0}$ -1.9 $\frac{-13.4}{23.8}$

+ 50

$\frac{0.0}{8.0}$ -4.7 $\frac{-30.6}{45.3}$

+ 80 5659.22

$\frac{-2.0}{9.5}$ -7.7 $\frac{-31.7}{46.7}$

Areas

Cub. yds.

Exc. Emb. Exc. Emb.

32

188.40

Sta 136+42 to 140+50

289.6 Exc 2455.2 Cy.

202.60

Slips 164.9 Sec P. 8. Class

299.2 $\frac{1}{2}$ Lo Rock = 82.5 Cy.

234.13

Balance of cut

Solid Rock = 2372.7

232.8 Haul, Sec P 8, 4885.

184.82

128.9

163.22

74.5

104.88

10.5

64.2

68.47 0.0

631 40.2

7.25 72.36

4.5 282.2

0.0 232.36

2088.0

201.3 SS.

164.9

Slips Sec P. 8

4455.2

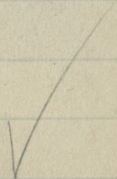
314.8

334.32

222.2

859.4

} 10.5



Section 3

Sta Station Grade

137 141 5658.54 $\frac{-1.8}{9.3}$ -8.2 $\frac{-22.3}{34.9}$

138 +09 $\frac{0.0}{8.0}$ -4.3 $\frac{-18.6}{30.1}$

+15 $\frac{+2.8}{8.7}$ $\frac{0.0}{4.0}$ -1.4 $\frac{-11.3}{21.2}$

139 +50 $\frac{+5.0}{9.3}$ +1.3 $\frac{0.0}{4.0}$ $\frac{-3.0}{10.8}$

+65 $\frac{+8.0}{10.0}$ +3.7 $\frac{0.0}{8.0}$

142 $\frac{+16.8}{12.2}$ +11.5 $\frac{+8.6}{10.2}$

+30 $\frac{+19.8}{13.0}$ +16.5 $\frac{+14.3}{11.6}$

14 +55 $\frac{+19.0}{12.8}$ +16.2 $\frac{+12.6}{11.2}$

+80 $\frac{+15.8}{12.0}$ +10.8 $\frac{+7.5}{9.9}$

143 5651.82 $\frac{+17.4}{12.4}$ +10.9 $\frac{+6.2}{9.6}$

Areas. Cub. yds.
Exc. Emb. Exc. Emb.

33

859.4

Sta 139+55 to 141+65

265.57

68.8 Emb'd 1481.7 Cft.
made from cuts
at ends.

00

14702

0.4

22.7

560

57.19

22.2

40.0

✓

2865

4.50

26.1

0.8

6530

00

991.7

490.

add extra width in

191.7

1481.7 slope as Matt took
slope of 1 1/2 to 1

230.40

316.5

339.35

305.6

320.80

246.4

211.46

157.7

214.30

✓

143.6

1410.2

Section 3

Sta Station Grade

137 143 +20 565.15

$\frac{+13.9}{11.5}$

+9.3

$\frac{+5.3}{9.3}$

138 +50

$\frac{+13.7}{11.3}$

+9.1

$\frac{+5.0}{9.2}$

144

$\frac{+12.7}{11.2}$

+7.7

$\frac{+3.9}{9.0}$

139 +40

$\frac{+13.3}{11.3}$

+8.0

$\frac{+3.6}{8.9}$

+67 564.621

+70

$\frac{+10.4}{10.6}$

+5.4

$\frac{0.0}{8.0}$

145

$\frac{+5.2}{9.3}$

+15 $\frac{0.0}{2.5}$ $\frac{-6.5}{15.1}$

+28

$\frac{0.0}{8.0}$

-4.6

$\frac{-20.5}{32.6}$

14 +45

$\frac{0.0}{8.0}$

-4.4

$\frac{-25.9}{39.4}$

+57 564.291

+72

$\frac{+8.4}{10.1}$

+3.3

$\frac{0.0}{8.0}$

145 +80

$\frac{+9.8}{10.4}$

+5.0

$\frac{+1.6}{8.4}$

146 +00.2 564.1.18

Areas.	Cub. yds.	
Exc.	Emb	Exc. Emb.
		34
173.52		1410.2 ✓
		Sta 141+09 to 145+28 Exc 2766.9 Cy.
	188.7	Class. Slips L.R. 2333.0
166.08		Balance of Cut S.R. 2533.6 "
	287.3	Haul, per P.9. 4420.
144.17		
	216.7	✓
148.40		
	133.5	
91.82	0.0	
	67.5	5.4
29.65	146.5	Sta 144+70 to 145+72 Emb 429.9 Cy.
	10.2	93.2
	2314.1	Made from Cut mat.
0.0	165.13	219.55 G.
		2333 Slips Sur P.9.
		2766.9 113.3
0.0	194.93	✓
	21.1	65.0
63.47	0.0	276.9 153.0 Extra in slope
		429.9
	23.1	
92.60		
	73.0	
	117.2	

Section 3

Station	Grade	L	C	R
131	146+05 564101	$\frac{+9.2}{10.3}$	+3.1	$\frac{0.0}{8.0}$
13	+25	$\frac{+17.00}{8.4}$	$\frac{3.0}{-1.8}$	$\frac{-12.1}{22.1}$
	+40	$\frac{+7.1}{9.8}$	+2.5	$\frac{0.0}{8.0}$
	-3.64			
13	+65	$\frac{+13.0}{11.3}$	+9.5	$\frac{+5.4}{9.4}$
	+95	$\frac{+12.7}{11.2}$	+10.5	$\frac{+7.6}{9.9}$
	147+21.2 5636.78			
	+23	$\frac{0.0}{8.0}$	+0.8	$\frac{0.0}{8.0}$
	+25		0.0	
	+35	$\frac{-3.8}{11.8}$	-7.1	$\frac{-10.4}{20.0}$
14	+75	$\frac{0.0}{8.0}$	-1.7	$\frac{-5.7}{14.1}$
	+95	$\frac{+3.3}{8.8}$	+1.3	$\frac{0.0}{8.0}$
	-3.053			
	148+15 5633.92	$\frac{+6.9}{9.7}$	+4.4	$\frac{+2.7}{8.7}$

Areas.	Cub. yds.	Exc.	Emb.	Exc.	Emb.	35
65.17	0.0	117.2		Sta 146 + 0.5 to 146 + 40		
		25.7	16.0	Emb. 40.0 Cyl. made from cut opposite		

425 64.93

15.2 12.0

50.65 0.0

28.0
1.20 in slope extra
40.0

103.0

171.93

Sta 145 + 45 to 147 + 25 Ex 713.1 Cyl.

Class Slip & Loose R 98.9.

202.2 Balance of Cut S.R 614.24

191.98

102.9 Haul, see P. 9, 1130.

6.40 00

0.0

0.1 36.1 Sta 147 + 23 to 147 + 95

162.59

566.3
47.9 L.S.G.

Emb 194.8 Cyl.

Slips

98.9 sec P. 9.

Made from Cut West.

713.1 149.1

00

38.74

6.0 9.6

24.12 0.0

194.8

38.1

Sta 147 + 75 to 148 + 36 Ex 91.5

Cut yds. Soils Rock

78.88

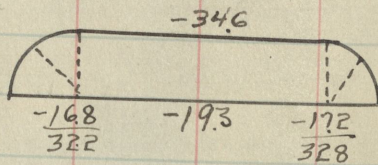
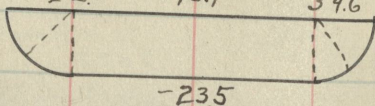
Haul loss from

32.2

76.3

Section 3

Sta.	Station	Grade	L	C.	R
13	148+35	5633.31	$\frac{0.0}{8.0}$	+1.0	$\frac{0.0}{8.0}$
	+36			0.0	
13	+70	200	$\frac{-6.1}{14.6}$	-10.7	$\frac{-12.3}{11.0} \quad \frac{-9.9}{19.4}$
	149	259+60	$\frac{-8.8}{18.0}$	-13.9	$\frac{-20.3}{24.0} \quad \frac{-18.7}{30.4}$
		-30.53			
13	+10	H.B.	$\frac{-10.0}{22.0}$	-15.7	$\frac{-21.7}{39.6}$
	+45	Toe		-23.5	
	150+38	Toe		-34.6	
	150+90	H.B.	$\frac{-16.8}{32.2}$	-19.3	$\frac{-17.2}{32.8}$
14	151		$\frac{-12.8}{23.0}$	-15.0	$\frac{-14.0}{24.5}$
	+20		$\frac{-4.9}{13.1}$	-5.5	$\frac{-7.6}{16.5}$
	+35	5624.15	$\frac{0.0}{8.0}$	-0.9	$\frac{-5.8}{14.2}$



Areas. Cub. yds.
Exc. Emb. Exc. Emb.

36

8.00 0.0 76.3 0.2 Sta 148+35 to 149+45

0.0 76.5 167.1 Emb 1177.8 C.Y.

15.0 155.

257.82 91.5 530.1 " " 146+55

405.6 542.5 " " 143+90

472.31

197.6

594.50

407.5

1177.8

805.8 Sta 150+38 to 151+62

746.25

Emb 1332.5

Made from Cut East.

221.5

450.05

213.0

125.15

432

0.0

30.29

22.7

1306.7

Section 3.

St Station Grade

L. C. R

13 151 + 45 **562384**

$\frac{+1.1}{8.3}$ $\frac{00}{70}$ -3.6 $\frac{-11.7}{21.6}$

13 +60
+62

$\frac{+3.2}{8.8}$ $\frac{00}{10}$ -0.4 $\frac{0.0}{8.0}$
0.0

+85

$\frac{+10.1}{10.5}$ +8.9 $\frac{+7.0}{9.8}$

13 152 + 10

$\frac{+16.6}{12.2}$ +14.6 $\frac{+12.5}{11.1}$

+60

$\frac{+20.1}{13.0}$ +17.2 $\frac{+14.5}{11.7}$

153

-30.53

$\frac{+9.4}{10.4}$ +9.2 $\frac{+9.6}{10.4}$

+20

$\frac{+4.1}{9.0}$ +3.2 $\frac{+3.0}{8.8}$

15 +70

$\frac{+14.9}{11.7}$ +13.5 $\frac{+11.4}{10.9}$

154

$\frac{+10.0}{10.5}$ +8.1 $\frac{+7.4}{9.9}$

+30 **561514**

$\frac{+1.5}{8.4}$ +0.6 $\frac{0.0}{8.0}$

Areas. Cub. yds.
Exc. Emb. Exc. Emb. 37

0.56 92.43 0.1
3.3 26.2

11.20 1.80
0.0 0.1
78.7 133.75

158.74
206.1

286.49 Sta 15435 to 154+78
590.1 Exc 2336.8 Cub yds

350.82 Sta 151+35 to 152+60 Class Top 2 ft
of original section 143.3 cu.
loose Rock 735.0 "

387.0 Balance Solid 471.8 "
152+60 to 153+20
Class Solid Rock 471.8 "

171.68 153+20 to 154+78 Class Top 2 ft
84.8 loose Rock = 176.8 cu.
Balance Solid Rock = 462.6 "
Class Slips loose Rock 160.7 "
" Subgrade Solid " 186.6 "

56.88 291.3 Total loose Rock 480.8 cu.
257.75 " Solid " 1856.0 "

227.8 Hand, See P. 10, 2350

152.22

90.6

109.2 0.0

1.24
1961.2

Section 3

Station Grade

L C R

13 154 + 35 5614.99

+1.0
8.3 0.0 -1.1
8.4

13 +55

+1.7
8.4 +0.9 0.0
8.0

+65

+2.3
8.6 +1.5 +2.2
8.6

13 +78

0.0
8.0 -1.3 0.0
8.0
Add for Boulder 4x5x8=3

+80

-1.4
8.8 -2.8 -10.0
19.5

155

-3.053

-12.2
22.3 -10.5 -11.0
20.8

+35

-19.8
31.8 -21.3 -24.1
37.1

B.C. 2x3x42

1 +84

0.0
8.0 0.0 0.0
8.0

156 + 15

+12.3
11.1 +10.8 +9.2
10.3

+50

+19.9
13.0 +17.3 +14.9
11.7

+50.7 5608.40

Areas Cub. yds.
Exc. Emb. Exc. Emb.

38

4.00 3.85 0.2

6.7 1.0
1.4

14.18 0.0

8.3

30.90 0.0

7.4 2.5 Sta 154 + 65 1/6 155 184

0.0

104.0

5.9

Emb 1878.9 made
from cuts at ends

1989.5

186.6 Sta. 3.3

160.7 Slips See P. 10

7952

2336.8

143.3

307.48

774.5

887.43

805.3

0.0

0.0

1728.9

150.0 in extra width of bank

115.7

1878.9

201.56

359.3

352.86

865.0

1340.0

Section 3
Station Grade L C R

157 5606.61 $\begin{array}{r} +29.7 \\ 15.4 \end{array}$ +258 $\begin{array}{r} +22.1 \\ 13.6 \end{array}$

+25 $\begin{array}{r} -36.4 \\ 16.2 \end{array}$ +281 $\begin{array}{r} +23.8 \\ 14.0 \end{array}$

+70 $\begin{array}{r} +24.5 \\ 14.1 \end{array}$ +22.5 $\begin{array}{r} +20.4 \\ 13.1 \end{array}$

157 + 71.7 5604.00

158 5602.87 $\begin{array}{r} +18.3 \\ 12.6 \end{array}$ +16.3 $\begin{array}{r} +16.0 \\ 12.0 \end{array}$

Clearing on Section 3.

Sta 106 to 158 ~ 75' wide = 8.95 Acres.

Areas Cub yds.

Exc. Emb. Exc. Emb.

39

1340.0

581.30

Sta 155+84 to 158

570.4 Exp 4087.7 Cub. Yds.

650.71

Class Seips, see P. 11,

946.9 Loose Rock 645.0 cu. y.

485.60

Sta 155+84 to 157+25, orig sections

457.4 Class Top 2 ft Loose R = 231.0 cu y

331.47

Class Balance Out Solid Rock

337.69

128.0

Sta. Total Loose Rock 876.0 cu y.

Slips See P. 11

645.0

" Solid " 3211.7"

4087.7

Haul, see P. 11, 28700.

Section 3

Page	Acres Clearing	Excavation Cubic Yards		
		Total in Cut Earth	Loose Rock	Solid Rock
20		2020.7 ✓	125.0 ✓	1895.7 ✓
22		2478.7 ✓	204.6 ✓	2274.1 ✓
23		1165.1 ✓	875.8 ✓	289.3 ✓
24		429 ✓		429 ✓
24		956.5 ✓	541.5 ✓	415.0 ✓
25		2745.6 ✓	648.4 ✓	2097.2 ✓
26				
27		2808.1 ✓	508.0 ✓	2300.1 ✓
29		4469.0 ✓	494.6 ✓	3974.4 ✓
30				
32		2455.2 ✓	82.5 ✓	2372.7 ✓
34		2766.9 ✓	233.3 ✓	2533.6 ✓
35		713.1 ✓	98.9 ✓	614.2 ✓
35		91.5 ✓		91.5 ✓
37		2336.8 ✓	480.8 ✓	1856.0 ✓
39	895	4087.7 ✓	876.0 ✓	3211.7 ✓
	895	29137.8 ✓	5169.4 ✓	23968.4 ✓

Summary

Borrow-Cu.Yds Cu.Yds.

40

Loose
Rock

Solid
Rock

Hauled
100'

4350. ✓

6730, ✓

1580. ✓

2170. ✓

4710. ✓

202 ✓

3650. ✓

14725. ✓

1634 ✓

4885. ✓

4420. ✓

1130 ✓

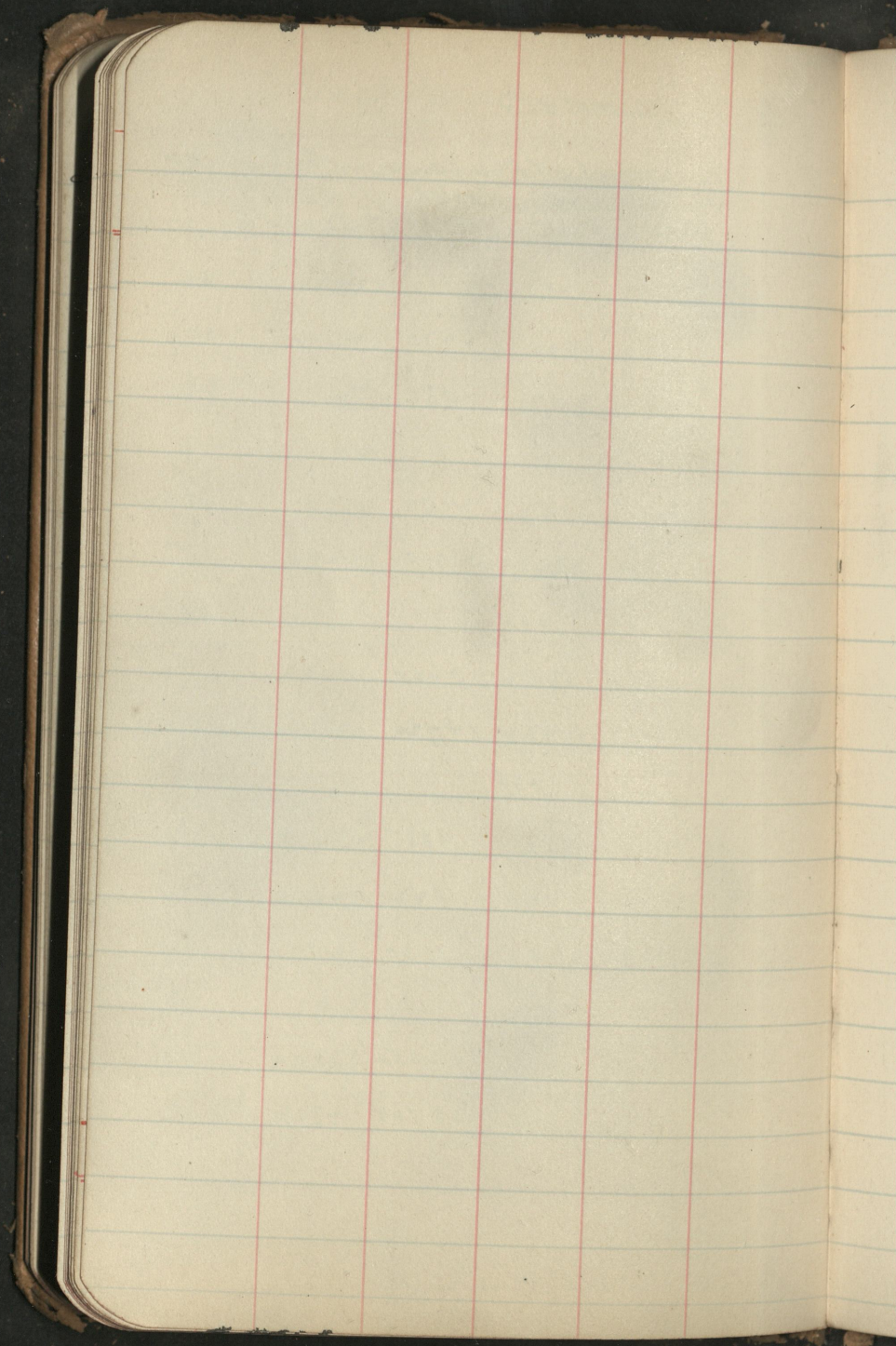
2350 ✓

28700. ✓

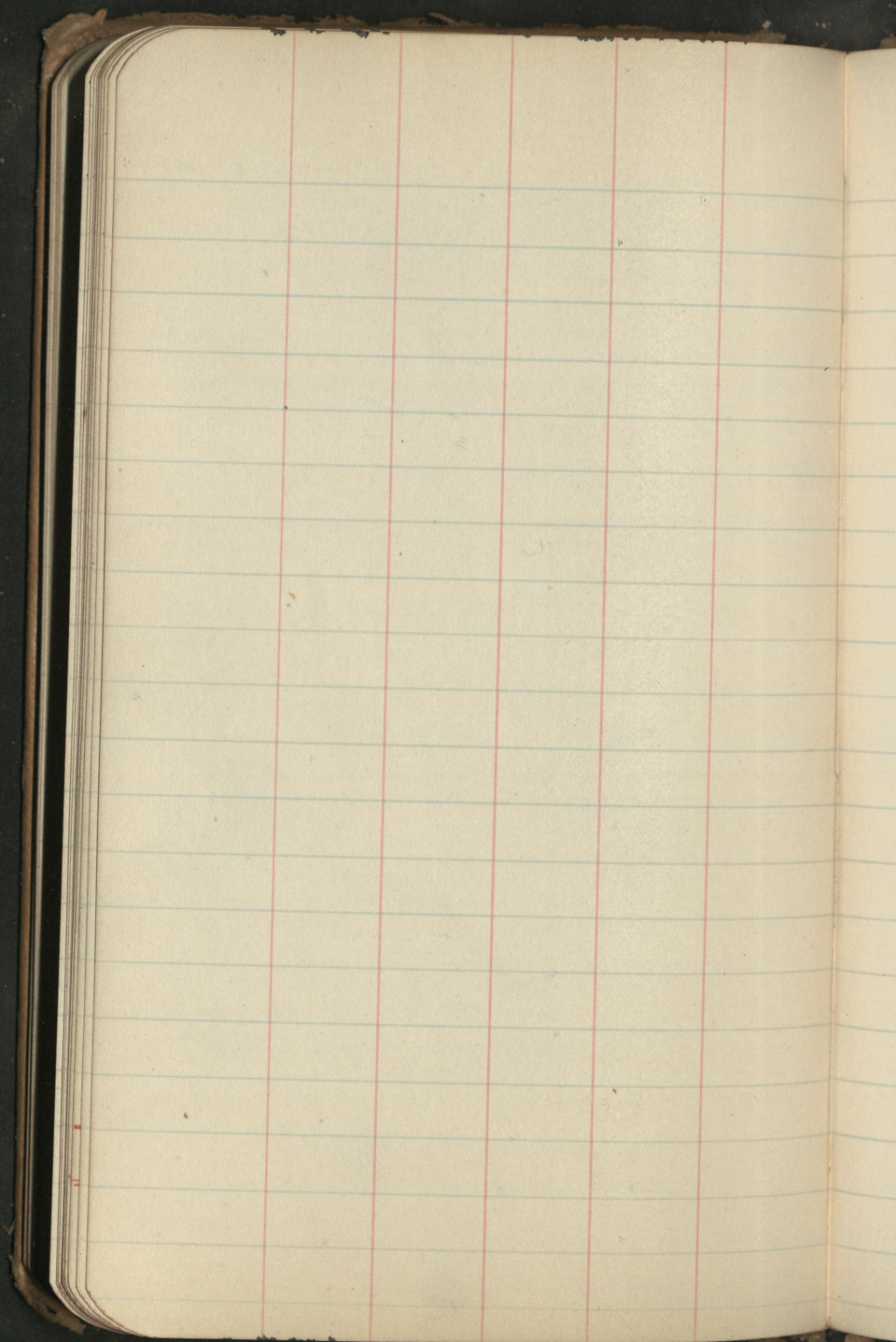
1836 ✓

79400. ✓

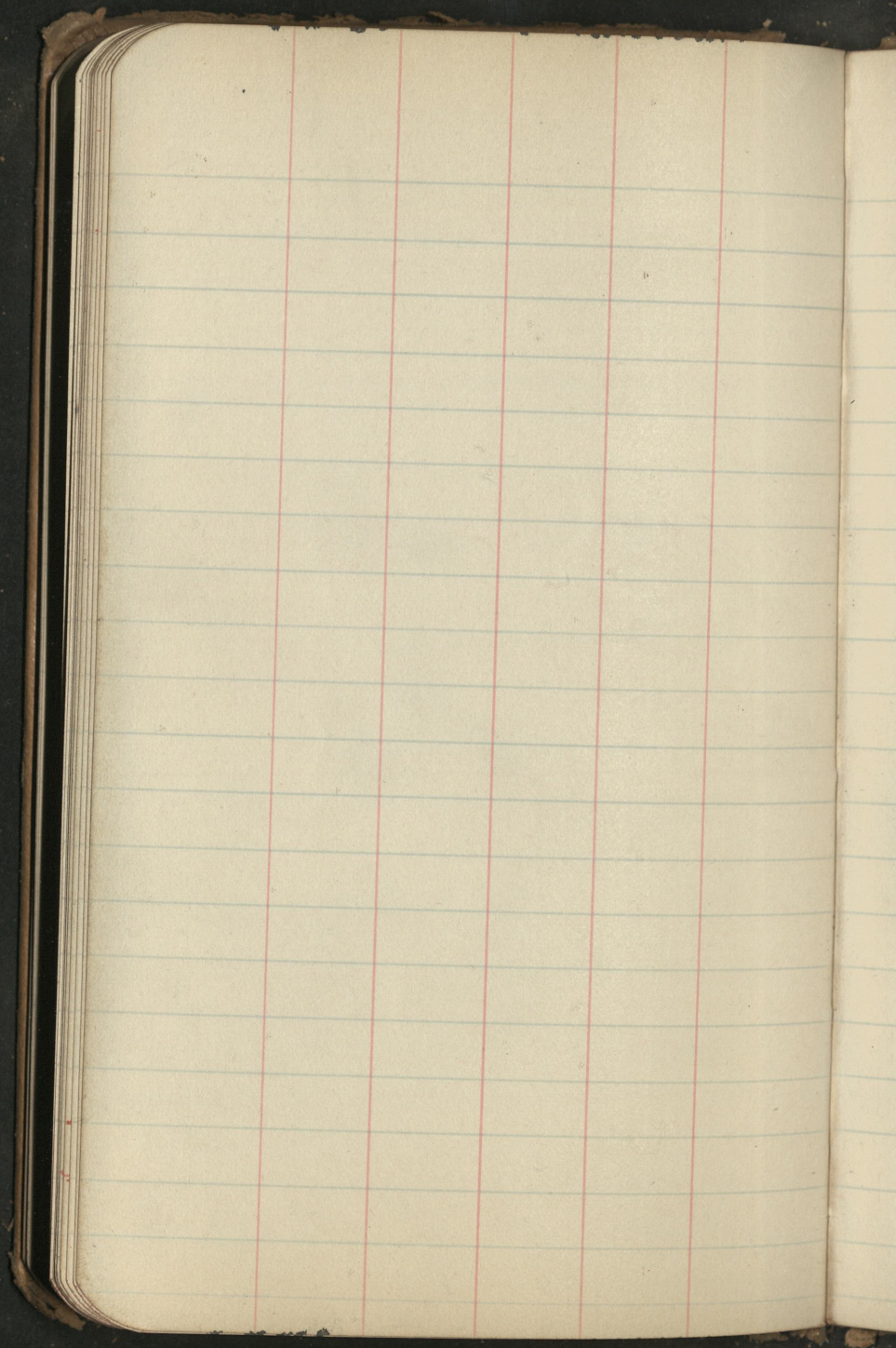
✓
wad



41



42



43

Station Grade

Section 4 -

L C R

158 5602.87

$\frac{+18.3}{12.6}$ +16.3 $\frac{+16.0}{12.0}$

+35

$\frac{+11.7}{10.9}$ +10.8 $\frac{+9.9}{10.5}$

+88

$\frac{+1.5}{8.4}$ +0.2 $\frac{00}{8.0}$

158+93

$\frac{00}{8.0}$ -1.2 $\frac{-1.3}{8.6}$

159+05

4.00

$\frac{08}{8.0}$ -3.9 $\frac{-4.5}{12.6}$

+10

4.5

$\frac{00}{8.0}$ -3.5 $\frac{-6.8}{8.0}$ $\frac{-6.2}{14.8}$

+35

$\frac{+3.6}{8.9}$ 00 $\frac{-10.8}{20.5}$

+53

$\frac{00}{8.0}$ -2.3 $\frac{-16.6}{27.8}$

+70

$\frac{-3.4}{17.2}$ -7.5 $\frac{-16.7}{27.9}$

160+05 5594.67

160+10

$\frac{00}{8.0}$ -3.0 $\frac{-9.7}{19.1}$

Areas Cub Yds

44

Exc. Emb Exc Emb

337.69

Sta 158 to 158+92 Exc. 695.2 Cu.

Class Slip Loose Rock = 85.6

349.8 Balance Cut Solid = 609.6

201.96

Have, see P12, 2250.

205.7

7.64 00

0.5 0.9

00 14.51

556.0

53.6 sq.

85.6 Slips See P12

695.2 16.3

58.72

12.4

00 75.22

Sta 159+10 to 159+53.

4.4 52.3 Exc. 7.6 Cut Loose Rock

14.40 37.80

3.2 45.7

00 99.27

7.6

Sta 158+88 to 160+84

99.6 Emb 52.3.4 Cub Yds

216.98

Made from Cut, 1/4

216.0

00 74.60

11.6 74.4

517.6

Section 4

Station Grade

L C R

160+55 5592.81

$\frac{+4.8}{9.2}$ +0.3 $\frac{0.0}{1.0}$ $\frac{-4.9}{13.1}$

+87

$\frac{+6.9}{9.7}$ +3.3 $\frac{0.0}{8.0}$

-372

161

$\frac{+6.9}{9.7}$ +3.7 $\frac{+0.9}{8.2}$

+13

5590.65

+15

$\frac{+8.1}{10.0}$ +3.7 $\frac{0.0}{8.0}$

+50

$\frac{+7.7}{7.9}$ +3.9 $\frac{0.0}{8.0}$

+60

$\frac{+13.8}{11.5}$ +7.7 $\frac{0.0}{8.0}$

161+75

$\frac{+16.8}{12.2}$ +10.9 $\frac{+6.8}{9.7}$

-344

162

$\frac{15.1}{11.8}$ +10.5 $\frac{+9.5}{5.0}$ $\frac{+5.6}{9.4}$

+35

$\frac{+8.5}{10.1}$ +4.5 $\frac{0.4}{8.1}$

+45

5586.12

$\frac{+8.0}{10.0}$ +3.2 $\frac{0.0}{8.0}$

Ledge 2.0x4.0x10.0 =

Areas		Cub. Yds.	
Exc.	Emb	Exc.	Emb

45

20.93 14.70

46.1 58

56.81 00

523.4

29.2

64.32

Sta 160+10 to 165+70

36.1 Exp 1578.9 Cub. Yds. Solid Rock

65.70

85.2

Haul 153 Cy. East from

" 12.7" opposite "

65.71

" 1200 yds 162+10 to 166+40 = 5160

36.3

130.28

Sta 160+30 to 161+35

95.6 Borrow for backfilling, see

213.76

Page 12, 29.5 Cy. Loose Rock

192.3

201.65

180.3

76.55

25.4

60.80 00

3.0

44.3

0.1

785.4

Section 4

Station Grade

L C R

162+65 5585.44

$\frac{+8.6}{10.2} + 3.0 \frac{0.0}{6.0} \frac{-1.0}{8.3}$

+75

$\frac{+6.8}{9.7} + 1.0 \frac{0.0}{2.0} \frac{-8.0}{17.0}$

163

$\frac{+12.2}{11.1} \frac{+8.2}{7.0} + 3.7 \frac{0.0}{8.0}$

+30

$\frac{+8.9}{10.2} + 2.3 \frac{0.0}{4.5} \frac{-7.3}{16.1}$

+45

$\frac{+9.6}{10.4} + 5.0 \frac{0.0}{8.0}$

+50

$\frac{+8.9}{10.2} + 6.0 \frac{+1.3}{8.3}$

+62.3 5582.07

+75

$\frac{+8.1}{10.0} + 4.0 \frac{0.0}{8.0}$

164+10

$\frac{+6.7}{9.7} \frac{0.0}{3.0} \frac{-4.4}{5.0} \frac{-14.8}{25.5}$

+40

$\frac{+3.3}{8.8} \frac{0.0}{3.0} \frac{-14.2}{24.8}$

+70.3 5578.05

164+80

$\frac{+6.3}{9.6} + 3.4 \frac{0.0}{6.0} \frac{-0.7}{9.7}$

Areas Cub yds

Exc	Emb	Exc	Emb
-----	-----	-----	-----

46

58.70

50

785.4

0.1

Sta 16+45 to 163+45

17.0

3.8 Emb 15.2 Cy. made

33.05

20.00

from Cut opposite

52.0

6.2

79.36

00

73.2

3.4

52.50

9.12

38.0

1.7

84.40

0.0

15.2

16.7

96.30

76.2

68.40

00

74.1

27.8

45.86

6430

30.1

79.5

8.25

78.89

44.4

59.2

51.72

1.02

87.2

2.4

1294.3

168.9

Section 4

Station Grade

L C R

165 + 40 5575.27

+ $\frac{4.4}{9.1}$ +13 $\frac{0.0}{5.0}$ -11
8.4

+70

$\frac{0.0}{8.0}$ -2.1 -5.5
13.9

166 + 15

-6.6
15.3 -8.3 -13.1
23.4

+40

-25.0 -16.3
38.3 8.0 -16.5 -28.9
43.3

+70

+85

-28.8 -30.8 -26.0
43.0 22.0 13.0 -29.2 -36.2 -48.2
25.0 67.3

+85

400

-22.7
35.4 -36.3 -30.0 -32.8
36.0 48.0

167 + 15

-12.5
22.6 -17.5 -28.5
42.6

+55

-5.6
14.0 -9.2 -16.7
27.9

+95

$\frac{0.0}{8.0}$ -2.2 -4.8
13.0

168 + 05 5564.67

-10.4 $\frac{0.0}{6.0}$ -2.7 -5.3
13.6

Areas

Cub Yds.

47

Exc. Emb. Exc. Emb.

1794.3 168.9

26.77 1.10

9.9

24.1

Sta 163+75 to 168+98

0.0

42.24

1304.2

262.7 59.

Emblt. 6108.6

Slip See P. 32.0

1598.9

2265 5385 yds made

229.55

from Cuts met

487.8 723.6 from Cut
East

824.02

1497.4

1871.13

969.7

1619.76

1296.5

714.00

729.5

270.79

230.1

0.0

399.0

.0.1

15.7

40

4501

.0.1

173

0.2

56635

Section 4

Station	Grade	L	C	R.
168+15	5564.27	$\frac{0.0}{8.0}$	-1.6	$\frac{-8.1}{17.1}$
+55		$\frac{-2.7}{10.4}$	-5.9	$\frac{-18.2}{29.8}$
+70	4.00 - 8.5	$\frac{-4.9}{13.1}$	-10.6	$\frac{-19.5}{31.4}$
+90	-6.5	$\frac{0.0}{8.0}$	-0.6	$\frac{-2.0}{9.5}$
+98	339-55	$\frac{+3.8}{9.0}$	+2.1	$\frac{0.0}{8.0}$
169+23	339+33 5559.94			
169+25		$\frac{+8.7}{10.2}$	+6.7	$\frac{+3.5}{8.9}$
+50		$\frac{+11.1}{10.8}$	+8.8	$\frac{+5.9}{9.5}$
170	-3.84 338+35	$\frac{+12.8}{11.2}$	+10.0	$\frac{+6.9}{9.7}$
170+40=0 Spot	338-51			
+50		$\frac{+13.6}{11.4}$	+10.1	$\frac{+7.2}{9.8}$
+75	5554.11	$\frac{+10.8}{11.5}$	$\frac{+10.6}{10.7} + 8.2$	$\frac{+6.4}{9.6}$

Areas. Cub. Yds.

48

Exc. Emb. Exc. Emb.

0.0 48.43

56635

177.9

191.74

142.5

321.25

123.5

0.0 12.25

3.3

1.2

33.05 00

61086

70.5

108.01

Sta. 168+90 to 171+98 Exc 17540 cu.

122.8 Class Slip of Rock = 77.1 "

157.32

Balance of cut solids = 1676.9 "

315.4 Haul, see P13, 2550.

183.30

345.9

190.26

161.9

159.52

139.9
1159.7

Section 4

Station Grade

L C R

171 + 10 5552.77

$\frac{+5.8}{12.7} \frac{+4.1}{9.2} +2.4 \frac{0.0}{8.0}$

+50

-3.84

$\frac{+11.0}{19.0} \frac{+8.4}{10.1} +5.0 \frac{+2.2}{8.6}$

+75

$\frac{+8.6}{23.4} \frac{+5.5}{9.4} +2.0 \frac{0.0}{8.0}$

+88 5549.76

171 + 98 =
1 + 58 spur.

$\frac{0.0}{8.0} -1.4 \frac{-3.5}{11.4}$

172 + 10

$\frac{-1.0}{8.3} -4.0 \frac{-13.7}{24.1}$

+13

-4.00

$\frac{0.0}{8.0} -3.0 \frac{-14.3}{24.9}$

+50

$\frac{+6.3}{9.6} +2.7 \frac{0.0}{5.5} \frac{-2.1}{9.6}$

172 + 92 5545.60

173

$\frac{0.0}{8.0} -2.1 \frac{-10.5}{20.1}$

+20

-3.13

$\frac{-2.7}{10.4} -5.7 \frac{-15.4}{26.3}$

+55 5543.66

$\frac{-2.5}{10.1} -4.6 \frac{-9.3}{18.6}$

Areas. Cub. Yds.

Exc. Emb. Exc. Emb.

49

56.29

1159.7

166.8

168.90

139.5

132.49 00

376

7.3

00

25.83

1503.6

1733.54

Slips See P. 13

77.1

31.6

116.25

1754.0

12.0

0.0

99.40

Sta 172+13 to 173

20.8

69.2

Exc 61.0 Cg. Solid Rock

45.57

1.55

28.1

62.8

0.0

66.25

48.9

12.1 1/2 S.S.

61.0

86.7

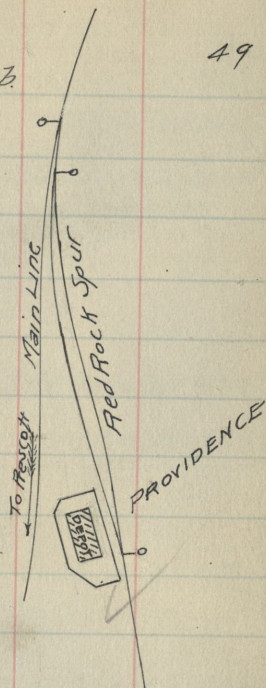
167.94

178.4

107.31

2593

707.3



Section 4

Station Grade

L

C

R

174

5542.22

$\frac{-3.6}{11.5}$

-7.1

$\frac{-15.8}{26.8}$

+25

235

$\frac{-6.3}{14.9}$

-10.1

$\frac{-15.8}{26.8}$

+45

-31.3

$\frac{0.0}{8.0}$

-1.5

$\frac{-4.3}{12.4}$

+70

$\frac{+1.6}{8.4}$

+0.6

$\frac{0.0}{8.0}$

174+85

$\frac{0.0}{8.0}$

-0.4

$\frac{-1.4}{8.8}$

B.C. 2 x 3 x 30

175+20

$\frac{-6.0}{14.5}$

$\frac{-5.2}{5.0}$

-7.4

$\frac{-7.5}{16.4}$

175+35³ 5537.98

+70

$\frac{-4.4}{12.5}$

$\frac{-3.9}{2.0}$

-5.1

$\frac{-18.0}{19.0}$

$\frac{22.2}{34.8}$

176

$\frac{-3.7}{11.6}$

-4.0

$\frac{-3.1}{4.0}$

$\frac{-8.7}{17.9}$

+10

-34.5

$\frac{0.0}{8.0}$

-2.0

$\frac{-4.4}{12.5}$

+20

$\frac{+3.4}{8.9}$

+1.7

$\frac{0.0}{8.0}$

176+28 5534.78

Areas.		Cub. yds.		
Exc.	Emb.	Exc.	Emb.	50
	203.87		707.3	Sta 171+75 to 174+90
	287.94		227.7	Emb 1062.3 Made from Cut Mat-
			117.9	✓
00	30.35			Sta 174+45 to 174+85
		3.5	9.4	Exp 17.4 Cyl Solid Rock
11.32	0.0		1064.3	✓
		2.1	1.5	
0.0	82.6	5.6		
		11.8	59.	
		17.4		
	149.13		102.0	Sta 174+90 to 176+20
	268.93			Emb 11.7. 714.0 Cyl.
			387.1	Made from Cut East
			196.6	✓
	84.94		22.4	
00	35.90			
		3.4	4.4	
279.7	0.0		714.0	
		122.2		
		125.6		

Station Grade.

Section 4

L C R

176 + 50 5534.10

$\frac{+13.6}{11.4}$ +10.1 $\frac{+7.5}{9.9}$

+70
-3.11

$\frac{+17.2}{12.3}$ +13.6 $\frac{+10.3}{10.6}$

177

$\frac{+18.3}{12.6}$ +14.5 $\frac{+10.8}{10.7}$

+18 5531.98

$\frac{+18.7}{12.7}$ +11.6 $\frac{+8.8}{10.2}$

+50

$\frac{+14.9}{11.7}$ +9.6 $\frac{+6.0}{9.5}$

178

$\frac{+11.3}{10.8}$ +6.2 $\frac{+2.0}{8.5}$

+30
-2.81

$\frac{+9.8}{10.5}$ +4.9 $\frac{0.0}{8.0}$

+50

$\frac{+10.5}{10.6}$ +4.7 $\frac{+0.4}{8.1}$

+85 x75

$\frac{+12.2}{11.1}$ +8.3 $\frac{+4.0}{9.0}$

178 + 93 5527.06

$\frac{+10.7}{10.7}$ +4.8 $\frac{0.0}{8.0}$

Areas.	Cub. yds.
Exc. Emb.	Exc. Emb.

51

191.97

125.6

169.5

265.72

306.1

285.33

176.1

242.82

253.7

185.36

276.3

113.03

109.8

84.53

63.7

87.55

152.8

148.22

34.9

87.68

20

20.4

0.1

168.89

Section 4
Station Grade L. C. R.

179 552685 $\frac{+10.0}{10.5} + 3.7$ $\frac{0.0}{5.5}$ $\frac{-2.0}{9.5}$

+30 511 $\frac{+8.4}{10.1}$ +3.5 $\frac{0.0}{8.0}$

+60 $\frac{+11.0}{10.8}$ +6.5 $\frac{+2.6}{8.7}$

+83 552426

180 $\frac{+11.5}{10.9}$ +7.5 $\frac{+3.3}{8.8}$

+50 $\frac{+10.1}{10.5}$ +5.6 $\frac{+1.1}{8.3}$

181 -3.45 $\frac{+7.3}{9.8}$ +2.9 $\frac{0.0}{8.0}$

+50 $\frac{+6.9}{9.7}$ +2.3 $\frac{0.0}{6.0}$ $\frac{-1.7}{9.1}$

182 $\frac{+6.4}{9.6}$ +3.0 $\frac{0.0}{5.5}$ $\frac{-1.6}{9.0}$

+08 551650

+40 $\frac{0.0}{8.0}$ -3.9 $\frac{-17.7}{29.1}$

+75 3.68 551405 $\frac{+5.6}{9.4}$ +1.1 $\frac{0.0}{2.0}$ $\frac{-6.1}{14.6}$

Areas. Cub. yds.
Exc. Emb. Exc. Emb.

52

69.59 1.50
1688.9 0.1

74.9 0.6

65.28 0.0
0.7

101.7 Sta 176+10 to 182+40

117.78

Cut 2800 Cub. yds.

185.8 Sta 182+10 to 182+40

class Lo. R.

19.0 C.Y.

class slip Lo. R.

20.0

133.08

Balance of cut Solid Rock

213.4 Total Lo. Rock 39.0 C.Y.

97.44

" Solid " 2761.0 "

141.1 Haul 273. West free

" 320. from 176+85 to 175+30 = 496

" 102. East free

" 290. from 180+85 to 183+25 = 696

" 120 - 440 into 1149 on Road = 526

55.01

00

93.2 0.5 Total Haul = 1720

45.65

.85

87.0 1.9

48.25

1.20

19.0 100.4

0.0

134.30

26.050
175.045 G.
20.0 slip. 500 P 13

28.00.0

12.4 96.7

28.67

15.25

20.7 194

33.1 218.9

Section A

Station Grade

L C R

183 5513.11

+4.0
9.0 0.0 -7.6
16.5

+15

+2.6 0.0
8.7 4.0 -2.7 -10.0
19.5

+40

0.0
8.0 -4.6 -19.1
26.4

+65

+3.2 0.0
8.8 2.0 -1.0 -10.0
19.5

+95

+7.8
10.0 +3.5 0.0
8.0

184 + 20

+10.3
10.6 +5.4 +0.9
8.2

+58 5507.30

+16.9
12.2 +10.2 +6.2
9.6

Ledge 25 x 5.0 - 10' = 46.

185 + 05

+19.7
12.9 +13.3 +9.1
10.3

+35

+21.1
13.3 +20.8 +13.0
11.3

+50 5503.77

+26.7
14.7 +19.7 +14.0
11.5

Areas Cub. yds.
Exc. Emb. Exc. Emb.

53

16.00 26.60

31.1

218.9

Sta 181 to 183.40 Emb

5.9

25.9

469.6 Cu yds. Made
from cuts opposite &
max

5.20 66.73

1.6

108.8

0.0

168.34

3.0

99.1

9.60

45.75

40.2

16.9

62.70

0.0

469.6

73.3

95.56

210.5

203.58

4.6

46.

411.7

269.48

367.6

392.24

225.9

420.87

811.2

2188.6

Section 4

Station Grade

L. C. R

186 550185

$\frac{+26.9}{14.8}$ +21.0 $\frac{+16.3}{12.1}$

+50

$\frac{+26.3}{14.6}$ +20.9 $\frac{+19.0}{8.0}$ $\frac{+13.4}{11.4}$

+93.8 549825

187

$\frac{+19.1}{12.8}$ +13.8 $\frac{+10.6}{10.7}$

+50

$\frac{+13.8}{11.5}$ +8.5 $\frac{+5.0}{9.3}$

+55

$\frac{+13.0}{11.3}$ +7.8 $\frac{0.0}{23.0}$

+95

$\frac{+7.0}{9.8}$ +2.5 $\frac{0.0}{8.0}$ $\frac{1.9}{17.4}$

188 +25

$\frac{0.0}{8.0}$ -1.8 $\frac{-5.9}{14.4}$

= O SPUR

+50 549200

$\frac{-6.6}{15.3}$ -6.9 $\frac{-11.3}{21.1}$

189

$\frac{-17.6}{29.0}$ -24.6 $\frac{-38.5}{55.1}$

Hole 3.5 x 7.5 x 15 = 14.6

+50 558830

$\frac{-31.1}{45.9}$ -40.6 $\frac{-44.0}{40.0}$ $\frac{-45.5}{62.0}$ $\frac{48.0}{67.0}$

Areas. Cub. yds.

54

Exc. Emb. Exc. Emb

455.25

2188.6

Sta 182+40 to 188+25 Ex 4769.1 Cu.

837.9

Sta 182+40 to 183+40
Class Loose Rock = 386 cu.

444.67

Class Slips $\frac{1}{2}$ to R. = 72.9 "

Balance of cur class Solid
Rock

676.5

280.95

Total Loose Rock 111.5 Cu.

411.6

" Solid " 4657.6 "

163.60

Have 286 yds East from

" 4200. from 186 to 189+50
= 14700. Hand

32.3

185.77

0.0

3.7

174.8

502.5

6.65

18.6

26.4

0.0

40.81

4340.3

283.0

145.8

SG.
Slips 500 P. 13.

4769.1

106.0 Sta 187+55 to 190+40

188.23

Emb 7822.7 Cu.

1313.9 Made from Cuts

1230.78

14.6 Each. way.

3464.5 by tra width from
Annie Spout

2510.57

2681.1

7610.2

Section 4

Station Grade

L C R

190 548646

$\frac{-7.7}{16.6}$ -12.4 $\frac{-18.8}{30.5}$

+25 $\frac{8.68}{-3.68}$

$\frac{0.0}{8.0}$ -3.2 $\frac{-5.3}{13.6}$

+40

$\frac{+5.7}{9.4}$ +2.6 $\frac{0.0}{8.0}$

190 + 95.4 5482.97

191

$\frac{+12.9}{11.2}$ +9.0 $\frac{+4.9}{9.2}$

+40

$\frac{+11.6}{10.9}$ +8.8 $\frac{+4.7}{9.2}$

Deduct pole 45x15x25 = 62.5

+75

$\frac{+9.0}{10.3}$ +7.3 $\frac{+3.4}{8.9}$

+95

$\frac{+5.9}{9.5}$ +2.6 $\frac{0.0}{8.0}$

192 + 15

$\frac{0.0}{8.0}$ -3.2 $\frac{-1.5}{16.4}$

+40

$\frac{-3.6}{11.5}$ $\frac{-8.3}{5.0}$ -8.0 $\frac{-21.6}{16.4}$

+60 5476.39

$\frac{0.0}{8.0}$ -3.8 $\frac{-17.4}{28.8}$

Areas. Cub. yds.

55

Exc. Emb. Exc. Emb.
7610.2

384.77

202.7

00

53.11

8.4

9.8

454.2

0.0

7822.7

231.6 Sta 190+25 to 192+15 Exc 764.3

163.00

Class Solid Rock 764.3 cu.

234.5

153.64

Haul 202.1 n. fr

625 deducted + 114.7

" 460 from 191+30 to 189+90
= 650 Haul

119.68

61.5

46.35

0.0

11.4

16.1

Sta 191+95 to 193

0.0

65.29

662.1

102.2 sq.

Emb 4 336.5 made

764.3

128.6 from Cut east.

212.53

127.2

0.0

130.82

33.6

64.6

336.5

Section 4

Station Grade

L C R

193

5474.79

$\frac{+7.8}{10.0}$

+4.1

$\frac{0.0}{8.0}$

+20

$\frac{+13.6}{11.4}$

+6.6

$\frac{+3.5}{8.9}$

+50

$\frac{+15.6}{11.9}$

+11.4

$\frac{+7.0}{9.8}$

19

194

4.0

$\frac{+17.2}{12.3}$

+13.0

$\frac{+9.2}{10.3}$

+35

$\frac{+17.8}{12.5}$

+14.2

$\frac{+10.1}{8.0}$ $\frac{+10.8}{10.7}$

+65

$\frac{+16.0}{12.0}$

+11.2

$\frac{+11.9}{3.0}$ $\frac{+8.6}{10.2}$

195

$\frac{+13.3}{11.3}$

+9.7

$\frac{+6.5}{9.6}$

1

+35

$\frac{+7.8}{10.0}$

+4.3

$\frac{0.0}{8.0}$

+85

$\frac{0.0}{8.0}$

-5.6

$\frac{-26.4}{40.0}$

196

5462.79

$\frac{-5.0}{13.3}$

-10.2

$\frac{-32.8}{48.0}$

Areas. Cub. yds.
 Exc. Emb. Exc. Emb

56

68.10 0.0 33.6

Sta 192+60 to 195+85 Exc. 2495.7^{cu.}

75.4 Class Slips To Rock 505.24.

135.39

Balance of last Solid 1990.51

194.2 Haul, see P. 14, 7150

214.09

432.0

252.50

339.2

270.78

278.3

230.19

266.2

180.57

162.3

69.90 0.0

0.0 226.80

43.1 140.0

1824.3

166.2 S.G.

505.2 Slips See P. 14

2495.7 186.6

444.93

595.1

921.7

Section A

Station Grade

196 + 30 5461.59

$$\frac{-10.4}{2.0}$$

$$-14.5$$

$$\frac{-31.4}{46.2}$$

+60

$$\frac{0.0}{8.0}$$

$$-2.2$$

$$\frac{-7.5}{16.4}$$

+78

$$\frac{+4.2}{9.1}$$

$$+2.2$$

$$\frac{0.0}{8.0}$$

+85

$$\frac{+4.8}{9.2}$$

$$+2.5$$

$$\frac{+0.7}{8.2}$$

197 + 05

$$\frac{+4.5}{9.1}$$

$$+2.2$$

$$\frac{0.0}{8.0}$$

+12 5458.31

+35

$$\frac{0.0}{8.0}$$

$$-2.6$$

$$\frac{-8.4}{17.5}$$

+60

$$\frac{-1.8}{9.3}$$

$$-5.9$$

$$\frac{-14.7}{25.4}$$

+80

$$\frac{0.0}{8.0}$$

$$-2.2$$

$$\frac{-8.2}{17.3}$$

198 + 16 5454.39

+23

$$\frac{+5.8}{9.5}$$

$$+2.9$$

$$\frac{0.0}{8.0}$$

+50

$$\frac{+7.8}{10.0}$$

$$+4.9$$

$$\frac{+2.0}{8.5}$$

Areas.

Cub. yds.

57

Exc.

Emb.

Exc.

Emb.

921.7

Sta 195+35 to 196+78

Emb'd 1310.9 Cy.

377.4

Made from Cut

00

53.09

Wet-

7.9

11.8

356.1

0.0

1310.9

10.3

Sta 196+60 to 197+35 Exp 91.8

43.75

Class Solid Rock 91.8 Cy.

29.8

Hauled East from

36.81

0.0

136

23.2

0.0

62.55

61.6

30.2

SG.

Sta 197+05 to 198+23

Emb 436.5 Cy.

91.8

103.1

148.3 made from

Cuts at Ends.

88.2 made from

80.2 Cut 194+20

160.12

0.0

56.54

25.8

30.0

48.58

0.0

236.5

66.5

84.53

170.0

262.3

Section 4

Station	Grade	L	C	R
199	5451.37	$\frac{+8.9}{10.2}$	+5.6	$\frac{+2.6}{8.7}$
+50		$\frac{+8.0}{10.0}$	+3.5	$\frac{0.0}{8.0}$
+85		$\frac{0.0}{8.0}$	-3.8	$\frac{-9.2}{17.5}$
200 + 15		$\frac{-5.1}{13.4}$	-12.2	$\frac{-26.7}{40.4}$
+35	-3.58	$\frac{0.0}{8.0}$	-3.7	$\frac{-13.8}{24.3}$
+50		$\frac{+3.9}{9.0}$	$\frac{0.0}{2.5}$ -1.2	$\frac{-11.2}{21.0}$
+75		$\frac{+6.0}{9.5}$	+1.6 $\frac{0.0}{2.0}$	$\frac{-7.8}{16.8}$
201 + 15		$\frac{+3.4}{8.9}$	0.0	$\frac{-5.0}{13.3}$
+35		$\frac{+7.9}{10.0}$	+3.6	$\frac{0.0}{8.0}$
+50		$\frac{+7.0}{9.8}$	+6.4	$\frac{+6.5}{9.6}$

Areas.

Cub. yds.

58

Exc. Emb. Exc. Emb.

98.92

2623

Sta 197+80 to 199+85 Exc 636.6 Cy.

150.4 Class Slips Loose Rock 98.1

Balance Soil's Road 538.5

63.50

0.0

27.4

34.9 Haul, see P14

440.1

0.0

80.65

98.4 56.

= 430.

Slips see P14

98.1

289.0

636.6

439.48

202.8

0.0

108.06

199+15 to 201+35

2.0

44.8 Emb'd 636.9 Cy.

107.2

53.30

made from Cuts

20.3

33.7 at Emb.

33.20

19.50

34.7

27.4

13.60

17.50

28.7

4.3

64.00

0.0

636.9

50.0

116.08

460.3

596.0

+65

202 + 99³ = 5437.19

203

+25
-3.7

+60

204 + 03³ = 5433.27

204 + 05

+33

+52 = 5431.32

+60

+34.5
16.6

+29.5

+25.5
14.4

+30.8

15.7

+25.8

+20.8

13.2

Deduct for Shaft 4x6x21 } 41.0
" * Cut 4x9x14 }

+25.6
14.4

+20.1

+15.7
11.9

+21.4
13.4

+16.1

+11.6
10.9

+14.0
11.5

+9.7

+6.1
9.5

+4.7
9.2

+2.0

0.0
8.0

0.0
8.0

-2.6

-5.4
13.8

Areas.	Cub. yds.	59
Exc. Emb.	Exc. Emb.	

596.0

505.36

Sta 200+35.7 204+60 Exc 577.57 Cy.

553.9 Class Slips $1\frac{1}{2}$ Loose Rock
= 381.3 Cy.

691.10

Balance of Cut
Solid Rock = 5394.4

675.3

767.58

Haul, See P. 15, 23000

678.6

697.25

827.3

579.21

426.0 41 ditches

429.52

490.7

327.61

424.9

182.25

113.2

36.00

0.0

0.0

472.4

12.0

15.7

4797.9

215.156

762.7

Slips See P. 15.

5775.7

36.2

51.9

205+33

$$\begin{array}{r} +52 \\ 9.3 \end{array}$$

+2.0

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

+42 5428.02

$$\begin{array}{r} +5.9 \\ 9.5 \end{array}$$

+2.5

$$\begin{array}{r} +1.0 \\ 8.3 \end{array}$$

+65

$$\begin{array}{r} +4.3 \\ 9.1 \end{array}$$

+2.7

$$\begin{array}{r} +0.7 \\ 8.2 \end{array}$$

+75

+8.5

$$\begin{array}{r} +2.0 \\ 8.5 \end{array}$$

+1.0

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

+80

0
m.
m.
1

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

-0.7

$$\begin{array}{r} -1.0 \\ 8.3 \end{array}$$

206

$$\begin{array}{r} -6.6 \\ 16.9 \end{array}$$

-7.6

$$\begin{array}{r} -9.3 \\ 21.0 \end{array}$$

+25

$$\begin{array}{r} -15.0 \\ 29.5 \end{array}$$

-16.0

$$\begin{array}{r} -16.3 \\ 31.5 \end{array}$$

Areas.		Cub yds.		60
Exc.	Emb	Exc.	Emb	
	148.00		51.9	Sta 20433 to 205+33
			71.9	Emb at 233.7 Cy.
00	111.00			Made from cut mat.
		0.2	20.7	✓
2.70	112.04			
		32.5	89.2	
38.10	00		233.7	
		14.7		Sta 20485 to 205+80 Exc 461.7 Cy.
49.85				Class Solid Rock 461.7
		39.7		Haul, see P. 16, 200.
4336				
		11.0		
16.25	00			
		1.0	0.6	
00	92.0	99.7		
		41.8	SG.	
		320.8		Extra Width see P. 16.
		461.7	77.4	
199.67				
			369.1	
597.55				✓
			780.1	
			1227.2	

Section 4

Station Grade

L C R

206+50 **5424.39** $\begin{array}{r} -20.6 \\ 37.9 \end{array}$ -23.5 $\begin{array}{r} -23.0 \\ 34.0 \end{array}$ $\begin{array}{r} -24.0 \\ 43.0 \end{array}$

B.C. 2 x 3 x 80

+75

$\begin{array}{r} -28.4 \\ 49.6 \end{array}$ $\begin{array}{r} -30.8 \\ 22.0 \end{array}$ -29.5 $\begin{array}{r} -25.6 \\ 36.0 \end{array}$ $\begin{array}{r} -33.0 \\ 56.5 \end{array}$

207

$\begin{array}{r} -25.4 \\ 45.1 \end{array}$ $\begin{array}{r} -32.7 \\ 16.0 \end{array}$ -34.2 $\begin{array}{r} -38.0 \\ 26.0 \end{array}$ $\begin{array}{r} -46.0 \\ 60.0 \end{array}$ $\begin{array}{r} -51.0 \\ 83.5 \end{array}$

+10

$\begin{array}{r} -23.6 \\ 42.4 \end{array}$ -34.5 $\begin{array}{r} -42.0 \\ 40.0 \end{array}$ $\begin{array}{r} -46.0 \\ 60.0 \end{array}$ $\begin{array}{r} -50.0 \\ 63.0 \end{array}$ $\begin{array}{r} -55.0 \\ 89.5 \end{array}$

+25

-3.36

$\begin{array}{r} -19.0 \\ 35.5 \end{array}$ -30.0 $\begin{array}{r} -35.4 \\ 20.0 \end{array}$ $\begin{array}{r} -43.6 \\ 40.0 \end{array}$ $\begin{array}{r} -49.0 \\ 60.0 \end{array}$ $\begin{array}{r} -58.0 \\ 94.0 \end{array}$

+35

$\begin{array}{r} -17.0 \\ 31.5 \end{array}$ -26.2 $\begin{array}{r} -35.2 \\ 40.0 \end{array}$ $\begin{array}{r} -39.0 \\ 60.0 \end{array}$ $\begin{array}{r} -50.0 \\ 75.0 \end{array}$ $\begin{array}{r} -54.0 \\ 88.0 \end{array}$

+50

$\begin{array}{r} -14.6 \\ 28.9 \end{array}$ -21.3 $\begin{array}{r} -34.8 \\ 59.2 \end{array}$ $\begin{array}{r} -32.5 \\ 47.6 \end{array}$

208

$\begin{array}{r} -2.5 \\ 10.7 \end{array}$ -5.2 $\begin{array}{r} -16.0 \\ 31.0 \end{array}$

+15

$\begin{array}{r} 0.0 \\ 8.0 \end{array}$

+25

$\begin{array}{r} +2.5 \\ 8.6 \end{array}$ +0.6 $\begin{array}{r} 0.0 \\ 1.0 \end{array}$ $\begin{array}{r} -8.3 \\ 19.5 \end{array}$

Areas Cub. yds.
Exc. Emb. Exc. Emb.

61

1087.42

1267.8

1651.04

1899.7

2452.29

Sta 205+75 to 208+75

920.9 Emb. & 940.87 C.Y.

2520.50

Made from Cuts

1329.3 each way.

2265.00

716.0

1601.65

753.6

1111.17

1189.2

173.17

00

1.6 91.7

12.88 24.90

23.1 12.6
24.7 940.80

Section 4

Station Grade

L

C

R

208+50 5417.67

$$\begin{array}{r} +6.0 \\ 9.5 \end{array}$$

$$+1.8 \begin{array}{r} 0.0 \\ 5.0 \\ \hline 10.5 \end{array}$$

$$\begin{array}{r} +75 \\ -3.36 \end{array}$$

$$\begin{array}{r} +6.3 \\ 9.6 \end{array}$$

$$+2.8 \begin{array}{r} 0.0 \\ 8.0 \end{array}$$

209

+6.3

$$\begin{array}{r} +7.2 \\ 8.8 \end{array}$$

$$+3.8 \begin{array}{r} +1.0 \\ 8.3 \end{array}$$

+17 5415.42

$$\begin{array}{r} +5.7 \\ 9.4 \end{array}$$

$$+2.9 \begin{array}{r} +1.2 \\ 8.3 \end{array}$$

+35

$$\begin{array}{r} +3.3 \\ 8.8 \end{array}$$

$$+2.0 \begin{array}{r} 0.0 \\ 8.0 \end{array}$$

$$\begin{array}{r} +45 \\ -3.67 \end{array}$$

$$\begin{array}{r} +1.5 \\ 8.4 \end{array}$$

$$0.0 \begin{array}{r} -1.8 \\ 9.3 \end{array}$$

+50

$$\begin{array}{r} +4.2 \\ 9.1 \end{array}$$

$$+1.8 \begin{array}{r} 0.0 \\ 8.0 \end{array}$$

+95

$$\begin{array}{r} +12.2 \\ 11.1 \end{array}$$

$$+9.7 \begin{array}{r} +6.5 \\ 9.6 \end{array}$$

210+07 5412.12

+10

$$\begin{array}{r} +12.9 \\ 11.3 \end{array}$$

$$+9.1 \begin{array}{r} +6.6 \\ 9.7 \end{array}$$

+40

-4.00

$$\begin{array}{r} +10.2 \\ 10.6 \end{array}$$

$$+8.0 \begin{array}{r} +6.3 \\ 9.6 \end{array}$$

Areas Cub. Yds.
Exc. Emb Exc. Emb.

62

37.05 2.30

40.2 0.7

49.84 0.0

9408.7

53.3

65.29

37.3

53.27

27.8

30.00 0.0

6.6 0.8

6.00 6.30

3.5 0.4
1.2

32.19 0.0

172.8 Sta 208 + 15% to 211 Exc 934.9 Cg.
Class Solid Rock

175.20

96.9 Haul 156.9 w fork

173.55

" 700 from 210 + 25% 207 + 70
= 1750 Yds Haul

178.0

146.80

150.5
791.6

Section 4

Station Grade	L	C	R
210+75 540940	$\begin{array}{r} +6.5 \\ 96 \end{array}$	+4.9	$\begin{array}{r} +35 \\ 89 \end{array}$
210+92 540872			
211	$\begin{array}{r} +5.1 \\ 93 \end{array}$	$\begin{array}{r} + \\ 33 \end{array}$	$\begin{array}{r} +1.5 \\ 84 \end{array}$

Spur at Annie Mine

187+50	0.0		+5.0
= 1 Spur 96.00	$\begin{array}{r} 80 \end{array}$	+35	$\begin{array}{r} 93 \end{array}$
1+20	$\begin{array}{r} +10 \\ 83 \end{array}$	+3.4	$\begin{array}{r} +6.4 \\ 96 \end{array}$
+50	$\begin{array}{r} 0.0 \\ 80 \end{array}$	+	$\begin{array}{r} +7.7 \\ \end{array}$
+75 0.	$\begin{array}{r} +18 \\ 88 \end{array}$	+4.6	$\begin{array}{r} +9.3 \\ 10.8 \end{array}$
2	$\begin{array}{r} 0.0 \\ 86 \end{array}$	+	$\begin{array}{r} +6.9 \\ 97 \end{array}$
+35 96.00	$\begin{array}{r} -3.5 \\ 11.4 \end{array}$	$\begin{array}{r} 60 \\ 46 \end{array}$ +1.0	$\begin{array}{r} +6.1 \\ 95 \end{array}$

Clearing on Section 4

Sta 58 to 170 ~ 75' wide =	90000'
" 170 " 176 ~ 100 "	= 60000
" 176 " 211 ~ 75' "	= 262500
947 Acres	= 412500'

Areas Cub. yds.
Exc. Emb. Exc. Emb.

63

8533

791.6

5561

$\frac{1}{2}$ SG.

653

856.9

78.2

934.9

5027

40.9

60.03

68.8

63.73

70.6

88.74

67.8

5769

0.0

57.6

31.15

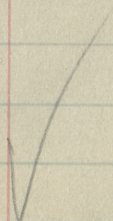
5.25

305.7

Total Exc. Spur 305.7 Ccf.
Class Solid Rock

Have 140 ft into extra width
of Bank = 430. Have

2.3



Red Rock Spur 0 at

17475 Main Line Grade	Road Bed L	C	R
1+38 Spur	on Left.	+8.6 10.2 +4.0 14.0	+6.4 +5.5 +3.8 3.8 8.9
1+58	13.0	+9.0 17.3	+2.7 8.0
1+80	15.0	+13.2 21.3	+3.4 8.9
2	5551.0	18.0	+14.5 23.6
+15	20.0	+10.4 24.6	+5.0 8.0
+50	22.0	+8.7 25.0	0.0 9.8
+60	23.0	+1.2	0.0 4.5
3	5551.40	23.0	+4.5 24.1
+20	23.0	0.0 24.0	7.9 11.5
+50	23.0	0.0 24.5	1.9 5.0
+70	23.0	0.0 25.1	7.6 12.0
+85	23.0	0.0 25.9	1.7 21.0
4	5551.70	23.0	0.0 24.8
+15	23.0	0.0 25.2	2.5 7.5
+50	20.0	0.0 21.7	0.0 4.3
+75	18.0	0.0 18.0	0.0 7.6
5	5550.70	14.0	0.0 18.1
+30	10.0	0.0 18.5	0.0 9.7
+50	8.0	0.0 16.8	0.0 6.7
+60		0.0 8.0	0.0 8.0
+90	5550.60	+1.30 11.0	+1.25 12.0
+94		+1.10 11.0	+1.44 12.3
6		+1.80 12.0	+1.59 12.0
+04			

figures in ring show elevation section

170+40 Main Line

64

Areas
Cut Fill Cub Yds.
Exc. Emb.

111.65 0.0 54.6 0.9

36.20 23.0 56.2 0.6

101.66 0.0 124.7 15

235.08 146.3 293.8

291.67 293.8

161.67 0.0 57.8 0.3

117.87 2.75 110.6 32.4

315.0 41.00 20.2 43.1

23.00 75.29 42.3 62.2

53.10 36.60 51.1 28.3

84.95 39.88 61.5 29.1

136.53 64.82 57.9 31.4

50.40 48.35 48.4 23.58

123.80 0.0 147.1 11.0

103.16 0.0 31.8 109.3

00 35.77 1792.3 272.4

200.36 289.88 159.3

140.10 25.9

0.0 0.0 135.4 577.9

243.75 22.7

62.78 14.4

66.75 5.0

0.0 177.5

Alignment of Spur

170+40 Main Line = O. Spur.

0 P.C. 11°30' L

Angle 9°46'

0+85 P.C. 15° L

0+90 Head Block Siding
on Right

Angle 11°24'

1+61 P.R.C. 4030' R

Angle 9°14'

3+66 P.T.

4+50 H.B. Siding

5 P.C. 10° R

Ang. 9°0'

5+90 E.P.D.

Excavation for Spur

14698 Cub yds Solid Rock

Haul 840 yds 170 yds

= 1430 Haul

Total Emb'd 814.2 Cu.

Made from Cuts.

See Sketch Page 49

show new section

Section A

Page	Acres (clearing)	Excavation - Cubic Yards			
		Total in Cut	Earth	loose Rock	Solid Rock
44		695.2		85.6	609.6
44		7.6		7.6	
45		1598.9			1598.9
48		1754.0		77.1	1676.9
49		61.0			61.0
50		17.4			17.4
52		2800.0		39.0	2761.0
54		4769.1		111.5	4657.6
55		764.3			764.3
56		2495.7		505.2	1990.5
57		91.8			91.8
58		636.6		98.1	538.5
59		5775.7		381.3	5394.4
60		461.7			461.7
62		934.9			934.9
64		1469.8			1469.8
63947		305.7			305.7
947		24639.4		1305.4	23334.0

(Amended)

Summary

Borrow-Cu.Yds Cu.Yds

65

Earth Loose Hauled
Rock 100'

2250. ✓

29.5 5160 ✓

2550. ✓

1720 ✓

14700 ✓

650. ✓

7150. ✓

430. ✓

23000. ✓

200. ✓

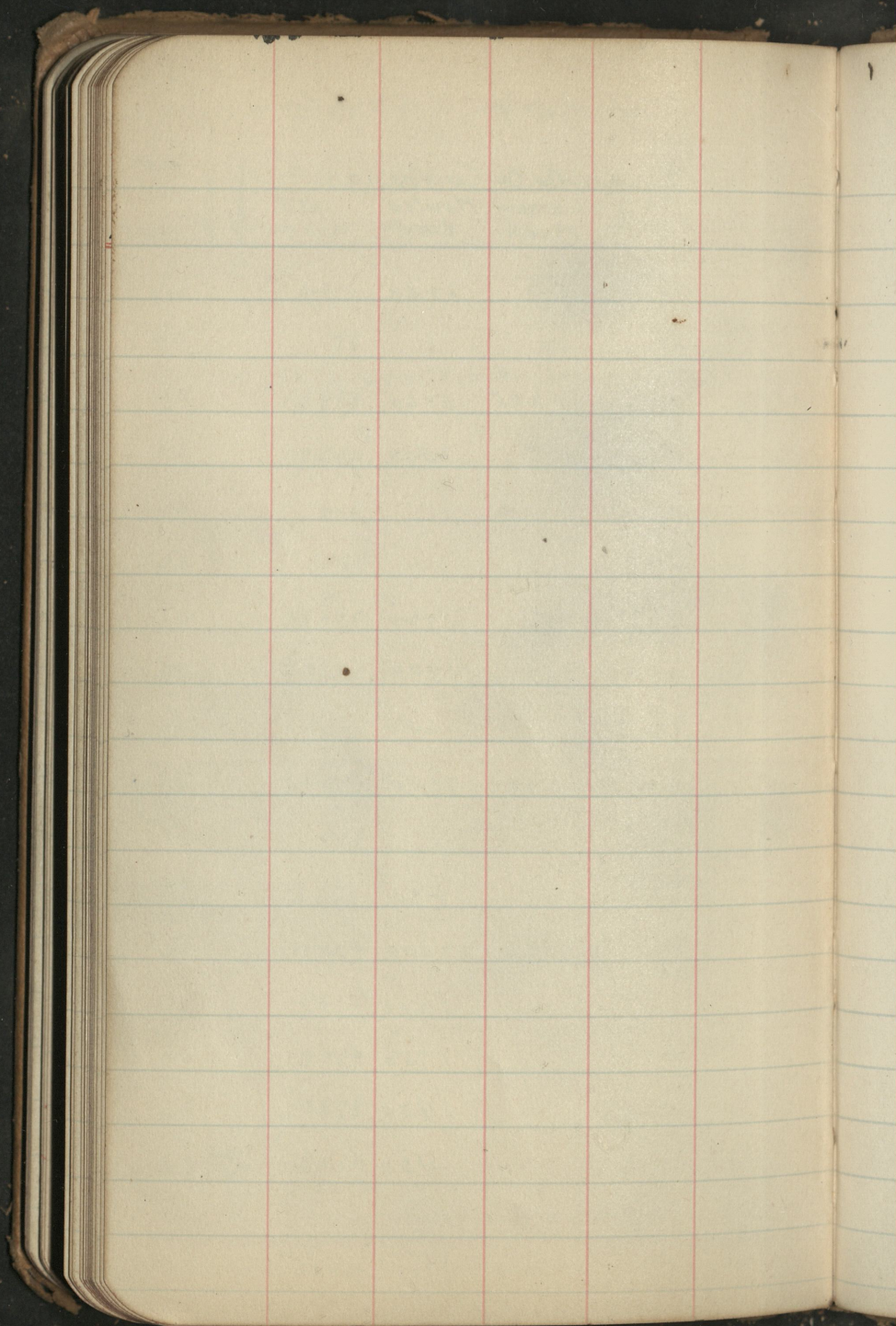
1750 ✓

1430 ✓

430 ✓

29.5 61420. ✓

✓
23000



66

Re Cross Section of Cuts after Work in Section 5

Stations L C R

211

+35 $\begin{array}{r} +8.6 \\ \hline 11.0 \end{array}$ $\begin{array}{r} 0.0 \\ \hline 7.6 \end{array}$ $\begin{array}{r} 0.0 \\ \hline 9.8 \end{array}$ $\begin{array}{r} +2.0 \\ \hline 14.0 \end{array}$

+75 $\begin{array}{r} +16.7 \\ \hline 21.4 \end{array}$ $\begin{array}{r} 0.0 \\ \hline 11.5 \end{array}$ $\begin{array}{r} 0.0 + 3.8 \\ \hline 7.6 \end{array}$ $\begin{array}{r} 18.6 \end{array}$

+95 $\begin{array}{r} (+22.0 + 8.0 0.0) \\ \hline 22.5 \end{array}$ $\begin{array}{r} 8.5 \\ \hline 8.0 \end{array}$ $\begin{array}{r} (+15.2) \\ \hline 12.0 \end{array}$ $\begin{array}{r} 0.0 \\ \hline 18.5 \end{array}$

212 +20 $\begin{array}{r} +25.8 + 17.0 0.0 \\ \hline 27.0 \end{array}$ $\begin{array}{r} 13.0 \\ \hline 9.0 \end{array}$ $\begin{array}{r} 0.0 \\ \hline 12.0 \end{array}$ $\begin{array}{r} +12.0 \\ \hline 18.0 \end{array}$

+45 $\begin{array}{r} +22.0 + 6.0 + 3.5 0.0 \\ \hline 24.0 \end{array}$ $\begin{array}{r} 12.0 \\ \hline 9.0 \end{array}$ $\begin{array}{r} 8.4 \\ \hline 10.0 \end{array}$ $\begin{array}{r} 19.0 \end{array}$

+60 $\begin{array}{r} +21.6 + 6.5 0.0 \\ \hline 24.5 \end{array}$ $\begin{array}{r} 10.8 \\ \hline 8.4 \end{array}$ $\begin{array}{r} 8.6 \\ \hline 15.5 \end{array}$

+70 $\begin{array}{r} (+20.0 + 8.0 0.0) \\ \hline 25.0 \end{array}$ $\begin{array}{r} 18.0 \\ \hline 8.0 \end{array}$ $\begin{array}{r} (+13.8) \\ \hline 8.0 \end{array}$ $\begin{array}{r} (+8.2) \\ \hline 14.0 \end{array}$

213 $\begin{array}{r} +18.5 + 4.0 0.0 \\ \hline 23.0 \end{array}$ $\begin{array}{r} 14.0 \\ \hline 8.5 \end{array}$ $\begin{array}{r} 0.0 \\ \hline 8.0 \end{array}$ $\begin{array}{r} +8.5 \\ \hline 13.5 \end{array}$

+50 $\begin{array}{r} +14.5 + 5.5 0.0 \\ \hline 21.0 \end{array}$ $\begin{array}{r} 13.0 \\ \hline 9.0 \end{array}$ $\begin{array}{r} 8.0 \\ \hline 11.0 \end{array}$

+75

+90

216

+25 $\begin{array}{r} +8.4 \\ \hline 15.2 \end{array}$ $\begin{array}{r} 0.0 \\ \hline 7.8 \end{array}$ $\begin{array}{r} 0.0 \\ \hline 22.0 \end{array}$ $\begin{array}{r} +1.0 \\ \hline 23.0 \end{array}$

+50 $\begin{array}{r} +11.1 \\ \hline 15.4 \end{array}$ $\begin{array}{r} +7.0 + 4.0 0.0 \\ \hline 18.0 \end{array}$ $\begin{array}{r} 10.0 \\ \hline 8.0 \end{array}$ $\begin{array}{r} 22.0 \\ \hline 26.0 \end{array}$

+70 $\begin{array}{r} +8.0 \\ \hline 11.0 \end{array}$ $\begin{array}{r} 0.0 \\ \hline 8.3 \end{array}$ $\begin{array}{r} 0.0 \\ \hline 15.0 \end{array}$ $\begin{array}{r} +3.0 \\ \hline 21.0 \end{array}$

217

+50

+56.6 = +83.7

218

was completed.

67

Areas ^{Excav.} Cub.Yds.

58.61
 101.68
 317.15
 395.10
 469.48
 424.39
 386.88
 406.10
 278.36
 179.84
 3300
 0.0
 2773.1
 45.6 deduct for wash
 2727.5

Sta 211 to 213 + 90
 Total Exp 2727.5
 in Original Secs. 1968.9
 Slips 758.6 Cub.Yds.
 Haul 2075 East for
 2570 from 212 + 30 to 214 + 80
 = 6300 hauled.

✓

0.0
 1809.4
 234.47
 152.41
 266.1
 1280
 385
 0.0

838
 192.3
 40 Bldg
 143.3
 99.5
 36.5
 10.4
 2.1
 571.9

Sta 216 to 218
 Total Exp. 571.9 @ 4.
 orig. sections 397.9 "
 Slips 174.0 "
 Haul 271.9 Cub. East for
 300 from 216 + 70 to 215 + 45 = 375.

✓

Section 5

Re Cross Section of Cuts.

S Sta	L	C	R	From
2 219+45				0
+65				94
220	$\frac{+8.2}{11.0}$	$\frac{0.0}{8.8}$	$\frac{0.0}{8.0}$	$\frac{+0.8}{8.2}$
+25	$\frac{+8.0}{10.5}$	$\frac{0.0}{7.0}$	$\frac{0.0}{8.6}$	73
21	$\frac{+12.0}{12.0}$	$\frac{+3.2}{14.5}$	$\frac{0.0}{8.0}$	$\frac{+3.0}{16.5}$
+50	$\frac{+15.2}{18.4}$	$\frac{+7.0}{12.3}$	$\frac{0.0}{8.6}$	$\frac{+4.6}{12.0}$
+70	$\frac{+18.0}{16.6}$	$\frac{+6.5}{11.0}$	$\frac{0.0}{8.6}$	$\frac{+6.0}{13.0}$
221	$\frac{+18.7}{19.5}$	$\frac{0.0}{8.6}$	$\frac{0.0}{8.4}$	$\frac{+7.2}{13.2}$
+25	$\frac{+16.7}{19.2}$	$\frac{+14.5}{18.0}$	$\frac{+6.0}{11.5}$	$\frac{0.0}{7.0}$
2	$\frac{+12.7}{13.2}$	$\frac{0.0}{8.4}$	$\frac{0.0}{9.0}$	$\frac{+2.0}{10.0}$
+50				
+80				
222				
+25				
2 225				
+13				
+35				
+50				
2	$\frac{+1.32}{12.5}$	$\frac{(11.3)}{10.8}$	$\frac{0.0}{7.1}$	$\frac{0.0}{8.2}$
+75	$\frac{+16.9}{17.5}$	$\frac{0.0}{8.0}$	$\frac{0.0}{8.5}$	$\frac{+10.0}{16.0}$
226	$\frac{+17.9}{17.0}$	$\frac{+11.7}{13.0}$	$\frac{0.0}{12.4}$	$\frac{+15.1}{11.8}$
+15	$\frac{+16.2}{17.0}$	$\frac{0.0}{11.0}$	$\frac{0.0}{9.6}$	$\frac{+12.4}{13.0}$
				$\frac{+14.6}{16.0}$

Cubyds
Areas Excal.

0.0
34.9
94.30
109.1
73.97
10.2 Bldrs.
65.3
67.08
95.8

131.93
133.8

221.47
270.5

265.43
23.7
266.3

309.70
270.8

275.27
230.5

139.68
68.1

44.08
13.6

0.0
1592.6

Sta 219+45 to 220+75

Total Exc. 1592.6 Cu yd.

Orig. Sects 1318.6 " "

Slip 274.0 " "

Haul 183.7 West face

" 235.7 East "

" 800 from 220+85 to 18+20 = 2120.34

" 340 " 221+50 to 215+25 = 2125 "

Total Haul 4245

0.0
1.7

10.2
22.0

43.75
39.1

97.04
136.3

197.47
243.2

327.79
197.0

381.56
345.2
984.5

+146
160

Sec. 5

ReCross Section

	L	C	R	
226+35	$\begin{array}{r} +2.15 \\ 192 \end{array}$ $\begin{array}{r} +2.11 \\ 133 \end{array}$ $\begin{array}{r} +8.6 \\ 12.6 \end{array}$ $\begin{array}{r} 0.0 \\ 9.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} +10.0 \\ 11.5 \end{array}$ $\begin{array}{r} +19.4 \\ 12.9 \end{array}$ $\begin{array}{r} +19.0 \\ 20.0 \end{array}$			
+50	$\begin{array}{r} +24.5 \\ 20.0 \end{array}$ $\begin{array}{r} +12.0 \\ 12.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} +11.0 \\ 10.5 \end{array}$ $\begin{array}{r} +22.4 \\ 21.0 \end{array}$			
+70	$\begin{array}{r} +18.8 \\ 22.0 \end{array}$ $\begin{array}{r} +19.0 \\ 17.0 \end{array}$ $\begin{array}{r} +6.0 \\ 13.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.4 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} +8.0 \\ 10.0 \end{array}$ $\begin{array}{r} +24.6 \\ 15.0 \end{array}$			
227	$\begin{array}{r} +25.3 \\ 23.0 \end{array}$ $\begin{array}{r} +8.0 \\ 14.0 \end{array}$ $\begin{array}{r} 0.0 \\ 7.0 \end{array}$ $\begin{array}{r} 0.0 \\ 7.4 \end{array}$ $\begin{array}{r} +11.0 \\ 11.0 \end{array}$ $\begin{array}{r} +22.6 \\ 19.0 \end{array}$			
228	$\begin{array}{r} +21.6 \\ 18.2 \end{array}$ $\begin{array}{r} +21.4 \\ 13.4 \end{array}$ $\begin{array}{r} +9.0 \\ 12.0 \end{array}$ $\begin{array}{r} 0.0 \\ 9.5 \end{array}$ $\begin{array}{r} 0.0 \\ 7.6 \end{array}$ $\begin{array}{r} +6.0 \\ 8.4 \end{array}$ $\begin{array}{r} 16.0 \\ 11.8 \end{array}$ $\begin{array}{r} 19.9 \\ 13.0 \end{array}$ $\begin{array}{r} 19.9 \\ 14.8 \end{array}$			
+60	$\begin{array}{r} +15.9 \\ 18.0 \end{array}$ $\begin{array}{r} +9.0 \\ 11.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.5 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} +15.0 \\ 11.5 \end{array}$ $\begin{array}{r} +16.7 \\ 14.5 \end{array}$			
+67	$\begin{array}{r} +15.7 \\ 17.0 \end{array}$ $\begin{array}{r} +15.1 \\ 11.8 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} 0.0 \\ 7.5 \end{array}$ $\begin{array}{r} +15.8 \\ 12.0 \end{array}$ $\begin{array}{r} +17.0 \\ 16.0 \end{array}$			
+77	$\begin{array}{r} +13.0 \\ 14.8 \end{array}$ $\begin{array}{r} +13.7 \\ 11.4 \end{array}$ $\begin{array}{r} 0.0 \\ 8.5 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} +12.0 \\ 9.3 \end{array}$ $\begin{array}{r} 14.5 \\ 11.6 \end{array}$ $\begin{array}{r} +16.0 \\ 12.2 \end{array}$			
228	$\begin{array}{r} +10.0 \\ 12.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} +11.4 \\ 12.0 \end{array}$			
+67				
+75				
228+75 to 229+30				
236+25				
+35				
+50				
237	$\begin{array}{r} +15.0 \\ 15.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} +11.9 \\ 13.8 \end{array}$			
+30	$\begin{array}{r} +19.8 \\ 14.6 \end{array}$ $\begin{array}{r} 2.0 \\ 8.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} +15.0 \\ 17.0 \end{array}$			
+65	$\begin{array}{r} +21.6 \\ 17.6 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} +17.6 \\ 12.4 \end{array}$ add mt 8x10x10			
238	$\begin{array}{r} +18.4 \\ 12.7 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} +15.5 \\ 20.0 \end{array}$ add mt 4x10x10			
+50	$\begin{array}{r} +12.7 \\ 11.2 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} +11.3 \\ 15.5 \end{array}$			

Areas Cub Yds.

550.48

984.5

315.2

584.41

468.5

680.57

763.7

694.08

545.4

483.91

550.2

364.90

95.2

364.93

122.1

289.65

214.1

213.03

274.3

8.07

0.8

00

1.36

4347.6

Sta 225 to 229+70

Total Exc.

43476 Cy.

In regular Sections

3723.4

Slips = 624.2

class $\frac{1}{2}$ Loose Rock = 312.1 $\frac{1}{2}$ Solid " = 312.1

Haul 125 yds W from

" 17" E "

" 220 from 225+80 to 24+20 = 450

" 3790 " 226+95 to 232+85 = 22360

14 aul = 22810.

00

Sta 236+25 to 239+04

2.4

19.52

19.2

44.45

324.8

301.36

400.5

428.47

566.0

444.75

47.2

13.3

553.0

411.55

14.8

617.5

255.36 bldrs = 11.8

2577.8

Total Exc

2781.3 Cy

in Original Sec.

2374.6 "

Slips = 406.7

class $\frac{1}{2}$ Loose R = 203.3 " $\frac{1}{2}$ Solid " = 203.4 "

Haul 177.7 W from

" 37.3 E "

" 1084.7 from 237 to 233+70 = 3580

" 1481.6 " 238+05 to 247+75 = 14370

Haul 17950

Sec 5

Re Cross Sections

L

C

R

238+87

+98

239+04

2

239+06

+30

+65

11.8

11.0

0.0

8.0

0.0

8.0

+17.2

10.0

12.4

11.1

0.0

8.0

0.0

8.0

+9.5

14.2

2

240

+54

12.0

0.0

8.0

0.0

8.0

+4.2

13.2

+50

+73

0.0

8.0

0.0

8.0

Areas

Cu. Yds.
~~277.5~~
197.5

32.2

6.7

0.70

0.1

0.0

278.3

0.0

15.4

52.00

144.7

171.36

254.3

221.02

301.6

104.90

44.6

0.0

760.6

Sta 239+06 to 240+73

Total Exp 760.6

in Orig Sec. 708.5

Slips 52.1

Haul 61.6 East free

" 229 from 240+30 to 241+80 = 330

" 479 = 239+80 to 247+45 = 326.5

Haul 359.5



Section 5

Station Grade

L C R

211 540843

$\frac{+5.1}{9.3}$ +3.3 $\frac{+1.5}{8.4}$

+35

$\frac{+8.1}{10.0}$ +5.0 $\frac{+2.8}{8.7}$

+75

$\frac{+13.8}{11.5}$ +10.4 $\frac{+6.8}{9.7}$

211+90

$\frac{+18.1}{12.5}$ +14.4 $\frac{+9.6}{10.4}$

212+05.3

$\frac{+21.0}{13.2}$ +16.7 $\frac{+12.8}{11.2}$

+20

$\frac{+20.5}{13.1}$ $\frac{+16.7}{17.6}$ $\frac{+12.6}{8.0}$ $\frac{+12.6}{11.2}$

Add for Boulder =

+45

$\frac{+18.1}{12.5}$ +14.0 $\frac{+11.0}{10.8}$

+60

$\frac{+19.0}{12.8}$ +14.0 $\frac{+9.4}{10.4}$

213

$\frac{+12.2}{11.1}$ +11.6 $\frac{+9.0}{11.2}$

+00.8 5401.04

+50

$\frac{+9.0}{10.2}$ +7.4 $\frac{+5.3}{9.3}$

Areas Cub. Yds
Exc. Emb Exc. Emb

71

55.61

94.6

90.40

Sta 211 1/2 to 213+90

209.7 Total Exc. 2811.9

Slip P. 67 = 758.6

Clear 1/2 to R = 379.3

" S.R. = 379.3

192.64

130.1 balance of cut Solid Rock

275.68

Total L.R. 379.3 @ 4.

170.7 " S.R. 2432.6 "

338.94

" Haul 6300.

194.5

361.20

2.0

296.6

279.50

154.0

276.00

363.1

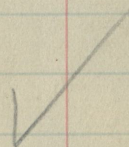
214.14

318.0

129.35

752

2008.5



Section 5

Station Grade L C R

213+75 5398.07 $\frac{+4.0}{9.0} +2.0 \frac{0.0}{8.0}$

14' RB 14' 1 Slope
Deduct for Wash = $2.2 \times 3.5 \times 16$
 $\frac{0.0}{8.0} -1.2 \frac{-4.6}{12.8}$

+90

-4.00

214+20

$\frac{-7.9}{16.9} -11.1 \frac{-16.4}{27.5}$

+50

2.4

$\frac{-16.2}{27.3} -20.2 \frac{-24.6}{37.8}$

+68' 5395.35

+75

$\frac{-27.7}{29.1} \frac{-23.0}{16.0} -27.2 \frac{-30.2}{14.0} \frac{-33.6}{49.0}$

215

$\frac{-17.5}{28.9} \frac{-22.0}{15.0} -25.2 \frac{-29.4}{17.0} \frac{-28.2}{42.3}$

+20

-3.00

$\frac{-16.0}{27.0} \frac{-27.0}{9.0} \frac{-23.4}{36.3}$

+35

$\frac{-16.5}{27.6} -22.9 \frac{-19.6}{31.5}$

+75

$\frac{-6.0}{14.5} -7.6 \frac{-7.2}{15.8}$

216

$\frac{0.0}{8.0} 0.0 \frac{0.0}{8.0}$

Areas Cub Yds

Exc. Emb. Exc. Emb.

72

33.00

00

6.0

5.3

2014.5

00

28.58

456

1968.9

1/2 5.9.

844

2000

2053.3

331.47

758.6

slips

7811.9

628.8

800.31

Sta 213 + 75 to 216

942.5 Emb 4924.1

1235.41

462 made from
cut 221 + 50

1096.0 balance from cuts
at ends.

1131.92

774.1

958.25

489.2

803.04

713.8

160.64

74.4

4924.1

00

00

558

Section 5

Station Grade

L C R

216+25 5388.58

$\frac{+8.0}{10.0} + 7.3 \quad \frac{+4.6}{9.2}$

+50

$\frac{+10.0}{10.5} + 7.8 \quad \frac{+5.7}{9.4}$
Add for Boulder =

+70

$\frac{+8.0}{10.0} + 6.3 \quad \frac{+4.4}{9.1}$

217

$\frac{+4.3}{9.1} + 1.1 \quad \frac{0.0}{8.0}$

+50

$\frac{+3.2}{8.8} 0.0 \quad \frac{-7.3}{16.2}$

217+83 J Back

217+56 Ford 5382.74

$\frac{+2.2}{8.6} \frac{0.0}{4.5} - 2.5 \quad \frac{-11.4}{21.2}$

218

$\frac{0.0}{8.0} - 4.4 \quad \frac{-15.6}{26.6}$

+45

$\frac{-6.4}{15.0} - 12.2 \quad \frac{-20.0}{32.0}$

218+72 5378.12

$\frac{-26.0}{10.3} - 6.6 \quad \frac{-16.0}{27.0}$

219+10

$\frac{-2.0}{9.5} - 6.1 \quad \frac{-18.2}{29.8}$

Areas		Cub. Yds		73
Exc.	Emb	Exc.	Emb	
120.48		55.8	Sta 216 to 218 Exc 613.1 Cub Yds. Solid Rock	
		120.7	<u>Haul 375.</u>	
140.41		4.0		
		92.7		
109.76		75.7		
26.61	00	36.5	15.8	
12.80	25.55	10.4	60.9 Sta 217 to 219 + 45	
3.85	72.03		Emb 1337.8	
		2.1	162.8 Made from Cut at East End.	
00	130.50	397.9		
		41.2	1/2 55.	
		439.1		
	Slips	174.0	424.7	
		613.1		
	379.10			
			283.6	
	188.19			
			266.5	
	190.57			
			123.5	
			1337.8	

Section 5

Station Grade

L C R

219+45 537650

$\frac{00}{80}$ 00 $\frac{00}{80}$

+65

$\frac{+6.7}{9.7}$ +6.0 $\frac{+3.0}{8.8}$

220

$\frac{+7.6}{9.9}$ +3.7 $\frac{+0.8}{8.2}$

Add for Boulders =

+25

$\frac{+7.6}{9.9}$ +4.0 $\frac{+0.6}{8.2}$

+50

$\frac{+10.5}{10.6}$ +6.3 $\frac{+3.4}{8.9}$

+70

$\frac{+13.5}{11.4}$ +9.0 $\frac{+5.8}{9.5}$

Add for Boulders

$40 \times 2.0 \times 10.0 =$

$50 \times 8.0 \times 10.0 =$

221

$\frac{+16.6}{12.2}$ +11.2 $\frac{+7.2}{9.8}$

+25

$\frac{+16.4}{12.1}$ +12.0 $\frac{+8.4}{10.1}$

+50

$\frac{+14.8}{11.8}$ +11.3 $\frac{+7.0}{9.8}$

+80

$\frac{+11.8}{11.0}$ +6.6 $\frac{+2.6}{8.7}$

Areas		Cub. Yds	
Exc.	Emb.	Exc.	Emb.

74

00

00

34.9

94.30

104.6

67.09

10.2

63.0

Sta 219+45 to 222+25

69.00

Total Exc 1726.0 Cu.

86.1

Slips. P. 68 = 2748 Loose R.

117.03

Balance = 1457.0 Solid

106.8

Hand 4245

171.25

23.7

216.5

218.40

208.7

232.40

204.5

209.24

184.3

122.61

61.7

1305.6

✓

Section 5

Station Grade

L C R

222 537081

$\frac{+5.8}{9.4}$ +2.4 $\frac{00}{8.0}$

+25

$\frac{00}{8.0}$ -2.7 $\frac{-9.7}{19.1}$

+50

$\frac{-6.8}{9.2}$ -5.5 $\frac{-13.6}{24.0}$

+80

$\frac{00}{8.0}$ -2.2 $\frac{-9.0}{18.2}$

223

10
22
N
1

$\frac{+3.4}{8.9}$ 00 $\frac{-4.8}{13.0}$

+20

$\frac{+5.0}{9.2}$ +1.4 $\frac{00}{4.0}$ $\frac{-2.5}{10.1}$

+40

$\frac{+6.3}{9.6}$ +1.6 $\frac{00}{6.0}$ $\frac{-2.3}{10.9}$

+65

$\frac{+6.0}{9.5}$ 00 $\frac{-3.2}{11.0}$

+90

$\frac{00}{8.0}$ -3.5 $\frac{-18.4}{34.6}$

224

$\frac{-1.3}{9.0}$ -5.1 $\frac{-18.1}{29.6}$

Areas Cub. Yds

Exc Emb Exc. Emb

75

44.08 00

00

70.54

Slips 1.66.

145.20

00

60.32

13.60

16.80

29.24

3.75

37.68

6.78

24.00

11.20

00

138.95

166.33

1305.0

13.6 21.8

1318.6

1331.459.

1452.0

274.0

1726.0

99.9

114.2 Sta 222+80 to 223+90

Exc 114.0 Cut Solid
Rock.

3.4

28.6

15.9

7.6

24.8

3.9

28.6

8.3

7.4

69.5

80.1

339.55.

114.0

56.5

237.5

647.8

Section 5

Station Grade

L C R

224+50 536523

$\frac{00}{8.0}$ -3.8 $\frac{-105}{20.1}$

225

$\frac{-20}{10.0}$ -4.8 $\frac{-81}{15.0}$ $\frac{-87}{20.1}$

16' R.B. $\frac{1}{4}$:1 Slope

+13

-2.23

$\frac{+0.5}{8.8}$ $\frac{00}{2.0}$ -2.6 $\frac{-6.0}{16.0}$

225+35 133

$\frac{+5.5}{9.4}$ +2.5 $\frac{0.0}{8.0}$

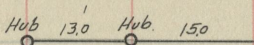
Areas		Cub yds		
Exc	Emb	Exc	Emb	76
00	90.14		647.8	
			194.2	Barri 80 to 25 + 35
00	119.63			Emb 896.2 Cuy.
		0.2	40.7	Made ground
1.02	49.60			Outs each way
		18.2	13.5	
43.75	00	18.4	<u>896.2</u>	✓

REFERENCE POINTS

L. C. R.

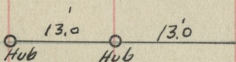
133+97⁴ Forc'd =

133+59³ Back PT.

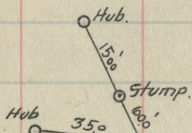


127+24¹ Forc'd =

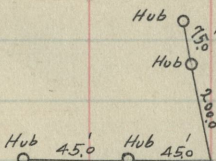
127+36⁶ Back PS. 9x10L



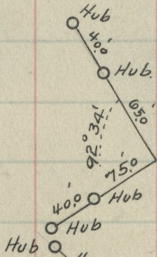
126+76 PT. 12° R



122+50

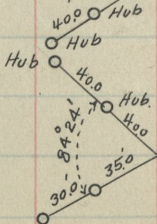


114+77 PS 7x12 R



THIS POINT CHANGED TO 114+82 P.C. 9° R.

112+84⁵ PT.



108+00 P.O.C.

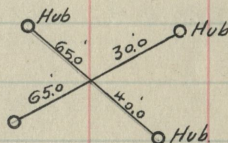
170

REFERENCE POINTS

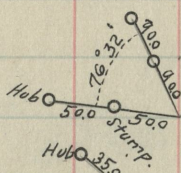
L C R

77

152+00 P.O.C.

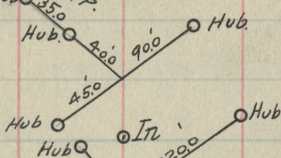


147+21.2 P.C. 18°R

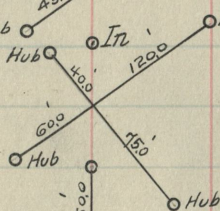


146+00.2 P.S. 11x11R

145+57 P.T.

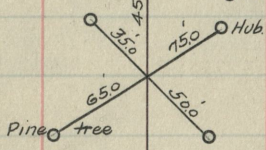


142+50 P.O.C.

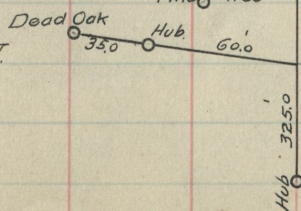


INGED
°R.

137+93 P.S. 9x10L



136°+83° P.T.



L. C. R.

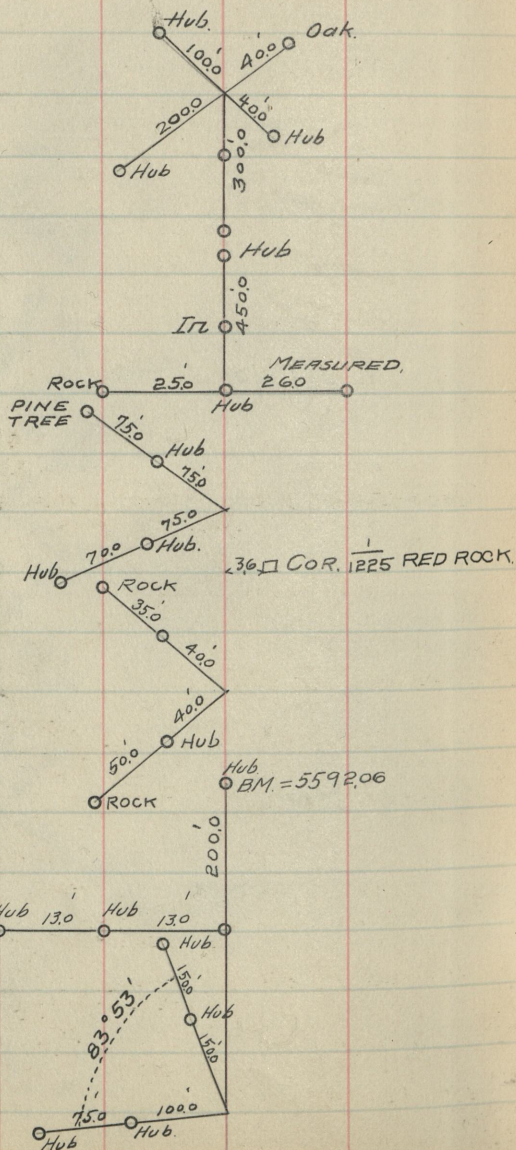
175 + 35.3 P.T. $8^{\circ}R$

171 + 88 P.T. 4°L

$$170 + 29^5$$

1

157+71.7 P.T. 18°R



L C R 78

L C R 78

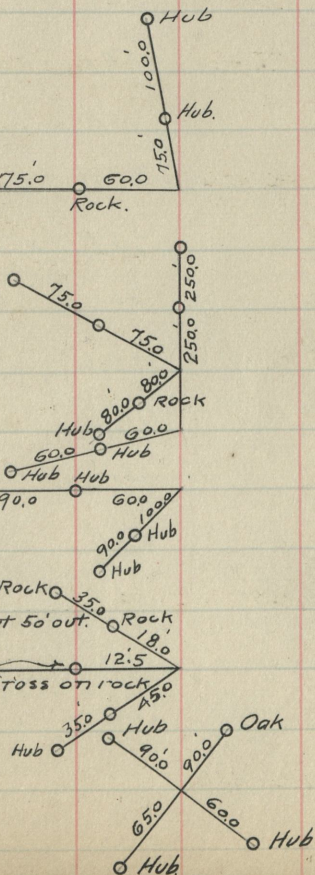


186 + 93.8 P.T.

184 + 58 P.C. 4° L. Hub

182+08 P.C. 8°L

179 + 83 P.T.



Bench Marks

Station		Elevation
104	15'L On Hub	5803.05
116	60'R "	5748.06
119+75	35'L "	5735.54
123+20	40'L "	5722.38
136+25	40'L "	5678.98
145+40	30'L "	5653.24
149	50'L "	5633.46
157	40'R "	5621.68
161+80	25'R On R.P.P.T. Prod.	5592.06
174+75	75'R " Tree	5538.97
183+30	20'L " Hub.	5517.94
189+75	50'L " "	5482.86
192+15	30'L " "	5482.09
196	40'L " "	5459.95
201+35	50'R " "	5445.99
208+15	15'L " "	5421.11
216	30'L " "	5391.51
225+50	35'L " "	5379.98

7017

05

06

52

38

98

24

46

68

06

97

74

86

09

95

99

11

51

98

79

